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ABSTRACT

Acknowledging that reasoning ability has been identified by the College Board as one of the six basic academic competencies, this guide is intended to help secondary school language arts teachers integrate critical thinking skills into their curriculum. The guide is divided into the following sections: (1) test-taking skills (summary of college related tests, general strategies, SAT and PSAT/NMSQT, analogies, antonyms, sentence completions, reading comprehension, test of standard written English, ACT, Advanced Placement Test, and Assessment of Skills for Successful Entry and Transfer); (2) questioning strategies (Bloom's Taxonomy, sample question items, oral questioning strategies, and student-generated questioning); (3) literature (labeling thought processes, group activities, teaching poetry, projects and enrichment, bulletin board, and testing); (4) writing (clustering, freewriting, writing groups, revision strategies, sentence combining, journals, metaphors, dictation, research, and essay questions); (5) logic (patterning, making inferences, drawing analogies, speculating/cause and effect, syllogisms, fallacies in logic, and brain teasers); and (6) vocabulary (identification of new words, context, word elements, word relationships/synonyms, antonyms, homonyms, acronyms, analogies, categories of words, Americanisms/euphemisms, and dictionary skills). (HOD)

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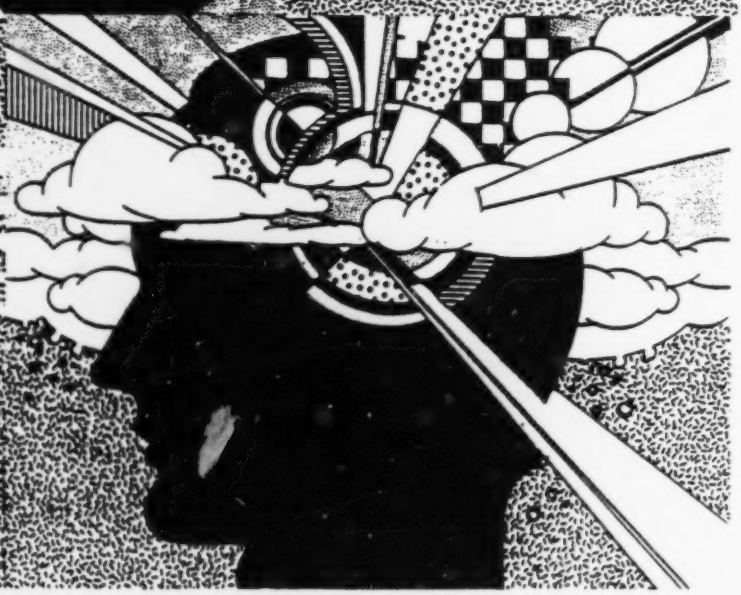
critical thinking skills

IN SECONDARY LANGUAGE ARTS



August 1985

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Preface

Reasoning ability has been identified by the College Board as one of the six basic academic competencies. Research studies such as the National Assessment of Educational Progress Report, Reading, Thinking and Writing, have found that mechanical proficiency in reading and writing and factual recall of information do not by themselves indicate the kind of thought that integrates learning.

In addition, when Brevard's PSAT results were analyzed, it became evident that the verbal items most often missed by students were those calling for higher order thinking skills.

Consulting with teachers Missy Kozacik and Marie Rogers, of Independence High School, Charlotte, North Carolina, and drawing upon research in cognitive hierarchies and hemisphericity, the Brevard County task team identified six areas of concern: Test-taking Skills, Questioning Strategies, Literature, Writing, Logic, and Vocabulary.

As we read the resource materials, certain generalizations emerged:

- Critical thinking is a complex skill, involving inference, assessment, comparison, patterning, and questioning, among others.

- Critical thinking is sensitive to context. A non-threatening environment, and one that encourages inquiry and discussion rather than rote memorization, will promote thinking.

- The reasoning process behind a student's conclusion may be as important as the conclusion itself. Exploration of the steps by which a conclusion is reached will help students understand the nature of thinking.

- Finally, to think critically, one must have knowledge.

This last generalization confirmed our intention to integrate the teaching of critical thinking skills within the existing curriculum, rather than to establish a separate domain. Thinking skills underlie the curriculum of every subject area, but they need not be formally presented as a discrete subject. Rather, they can be incorporated in teaching strategies and classroom methodology and presented within the context of subject matter.

This guide is intended for secondary language arts teachers of all phase levels. However, it would take very little adaptation for a history, mathematics, or science teacher to make use of the ideas which are included.

Carole Bencich
Resource Teacher
Secondary Language Arts

Summary of College Related Tests

Use this analysis of college related tests administered in Brevard County Schools to advise students on each test's format and to determine skills that are assessed.

	PSAT/NMSQT	SAT	ACT	AP Lit and Comp	ASSET
EXACT TITLE	Preliminary Scholastic Aptitude Test/ National Merit Scholarship Qualifying Test	Scholastic Aptitude Test	American College Test	Advanced Placement English	Assessment of Skills for Successful Entry and Transfer
GRADE LEVEL	Recommended for soph. year to identify strengths and weaknesses; should be taken by all college-bound juniors	Recommended for junior and senior year of high school; can be taken several times to improve score	junior or senior year of high school	predominately senior year	before junior college entrance
ADMINISTRATION DATES	October only	October January November March December May June	October April December June February	May	August (or beginning of school year)
TEST PURPOSE	to find out how a student compares nationwide; an impartial evaluation of ability to do college work; to identify potential A.P. candidates	part of the college admissions process and placement	for college entrance and career/college guidance information	to grant credit and/or assignment to a college course on basis of evidence that student has mastered equivalent of an introductory Eng. course	to support student advising, placement and retention at two-year institutions; entering students complete educational planning questionnaire and series of short assessments in language usage, reading and numerical skills; used to direct students to appropriate academic programs & computer resources; gives student an ability profile report
TEST ORGANIZATION (VERBAL)	65 total verbal questions; 2 sections: 1 verbal & 1 math	85 total verbal questions; 2 verbal sections; 1 section Test of Standard Written English	1 English language usage test (40 min., 75 questions); 1 natural science & 1 social studies reading comprehension	1 English Literature & Composition, multiple choice (Section I); 1 English Literature & Composition free response essay (Section II)	16 quest. on language usage; 40 quest. on reading comp. (5 passages, approx.100 words); 45 quest. adv. lang. usage (5 passages, approx.200 words)

	PSAT/NMSQT	SAT	ACT	AP Lit and Comp	ASSET
SCORING (VERBAL)	Each correct answer has equal weight regardless of difficulty of question; on the Nat'l Merit Qualifying Index (by which junior test takers qualify for Nat'l Merit Semi-finalist or Commended Student status), the verbal score is doubled and added to the math score (2V + M); score ranges from 20-80; penalty for wrong answers (random guessing) 1/4 pt. on 5-choice verbal questions	Each correct answer has equal weight regardless of difficulty of question; verbal score is doubled and added to math score (2V + M); score ranges from 200 - 800; penalty for wrong answers (random guessing) 1/4 point on 5-choice verbal question; need 900 composite score for state institution	Standard score ranges from 1 - 36;reported in national percent ranges; NO penalty for wrong answers or random guessing (student should answer every question); composite score of math, English, science & soc. studies 1 - 35; composite score for state school entry- 18	ext. well qualified - 5; well qualified - 4; qualified - 3; possibly qualified - 2; no recommendation - 1 need a score of 3 &above to receive college credit depending upon individual college requirements multiple choice 40% of grade; essay 60% of grade	Scores at 25% or below recommended to take Eng/Rdg Fundamentals for building foundation skills & for ESL student; mid 35% should take intermediate Eng/Rdg for strengthening skills; top 40% - skills good for most postsecondary learning opportunities Scores used by instructors to review skills of students & relationships to course content & expectations, textbook levels, pre-requisites, teaching methods & support services important to student success.
TIME	50 min. verbal section 50 min. math section	30 min. per section	40 min. for 75 English usage questions (time varies for other sect.)	75 min. for multiple choice section; 105 min. for essay question	20 min. for Reading skills; 11 min. for Lang. Usage; 25 min. for Adv. Lang. Usage
READ-ABILITY LEVEL	10th grade - second year college (Verbal); 10th grade & below (Math)	recommends strong 12th grade vocabulary	unknown	unknown	at least 10th grade
SKILLS TESTED (VERBAL)	ANTONYMS (20 questions, arranged from easy to difficult); tests words from general reading in literature, soc. studies; science, humanities; tests general knowledge & fine distinctions ANALOGIES (15 questions, arranged from easy to difficult); tests ability to establish relationships abstract & concrete; draws from content areas of literature, science, social studies & humanities	ANTONYMS (25 questions, arranged from easy to difficult); 20 sec. per question recommended; tests same skills as PSAT/NMSQT ANALOGIES (20 questions, arranged from easy to difficult; 30 sec. per question recommended; tests same skills as PSAT/NMSQT	ENG.USAGE & GRAMMAR - 75 items; shorter than SAT or PSAT; tests punctuation, grammar, sentence structure, diction & style, logic & organization; contains single prose passages that students correct by selecting among various alternate phrasings, matching gramatically related elements (subj-verb agreement, parallelism, etc.) elimin. redundancy; measures ability to diagnose frequently encountered mistakes in Eng. usage & grammar	ENG. LIT & COMP - Students must display awareness of language & understanding of writer's craft & critical standards for independent appreciation of literary work; also sensitivity to literature as shared experience. To achieve these goals students must study individual works for language, characters, action,themes, structure, meaning, value, relationship to contemp. times.	LANGUAGE USAGE SKILLS - 16 sentences with underlined elements which students identify as correct or incorrect; errors involve common mistakes in spelling, punctuation and usage. (No alternatives are given - student marks I or C for each item.) READING - Passages are non-fiction, drawn from business or career-oriented subjects. Questions call for details & limited interpretation ADVANCED LANG. USAGE SKILLS - 5 reading passages with 45 underlined elements, for which students choose alternatives; tests ability with written English, especially distinctions of style & tone

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PSAT/NMSQT	SAT	ACT	AP Lit and Comp	ASSET
SENTENCE COMPLETION - 10 items; tests ability to recognize logical relationships among sentence parts & logical consistency among elements of a sentence; uses content areas of science, social studies, literature & humanities	SENTENCE COMPLETION - 15 items; 40 sec. per item recommended; same as PSAT/NMSQT	NATURAL SCIENCE/ SOCIAL SCIENCE - tests student understanding of material presented; also application of material to specific situations; Content: biology, chemistry, physics, physical science; student must make inferences, analyze material & select suitable title for selection; also indicate whether author would agree/disagree with particular statements (evaluation).	Essay question requires knowledge of different literary genre, styles and periods. Test items require students to identify main idea, restate information, make inferences, apply information in a passage to other situations, analyze arguments or organization used by an author & recognize tone or attitude	
READING COMPREHENSION - 20 items on passages of 200 - 450 word length; tests main idea, inference, restatement of specific information, application of information to other situations, analysis of arguments or organization used by author, recognition of tone and attitude; narrative & argumentative selections taken from science, social studies, humanities (passages NOT arranged by level of difficulty) (no Test of Standard Written English)	READING COMPREHENSION - 25 items on passages of 200 - 500 word length; same as PSAT/NMSQT TEST OF STANDARD WRITTEN ENGLISH - used for placement in appropriate Eng. course; 30 min. in length; 35 usage items; 15 sentence corrections; tests skills needed for college courses; also ability to recognize kind of lang. essential to finished piece of writing; tests application of subject-verb agreement, sentence structure, use of transitions, use of vocabulary for clarity, logic & consistency	The Natural Science and Scocial Science tests are two separate sections of the test, with scores reported separately.	FREE RESPONSE/ESSAY - Goals are the honest & effective use of lang. & the organization of ideas in a clear, coherent, persuasive way; requires logical progression from thesis statement to conclusion	

Test-Taking Information

Introduction

Many resources are available to help students prepare for college level exams. They present a variety of test-wiseness clues and studying strategies to improve test scores. Some suggestions (such as working with analogies) help students better prepare for the material on the test, while others (becoming familiar with the test format and directions prior to the testing date), help the student feel more at ease with the test.

The best of the materials available will be of little help if a student uses them merely to "cram for the exam." Improved scores come from a well thought out study plan that is used systematically over a period of time.

The following suggestions are for students and teachers to use as part of the preparation for taking tests.

Test Taking Information

A. General Test Strategies for Students

1. Become familiar with the format and the types of questions. Know what will be expected of you from the test directions. (See pages 1 - 3 of this guide, as well as published samples of the test.)

2. Don't arrive at the test site too early.

3. Schedule your time for the subtests; some portions are more difficult and will take longer than others.

4. Know if there are any penalties for guessing or omitting answers. Realize that it is possible to get a good score without answering every question.

5. On the SAT, 1/4 point is taken off for each wrong answer on a five-part question because it is possible to get 20% of the answers right through random guessing. (1/3 point is taken off for each wrong answer on a four-part question.)

6. Answer the easiest questions first. They have the same value as the more diffcult ones.

7. Try this system to mark your answer sheet: Mark a "+" by any questions that you may be able to figure out if time permits. Put a "-" sign by questions that you can't answer. After answering all of the questions that you can work through quickly, go back

to work your "+" questions. Then, if time permits, go back and try the "-" questions. Remember to remove all stray marks on your answer sheet when you are done.

8. Don't make a decision about an answer until you have read all of the choices. Some choices may vary by only a slight degree.

9. It is important that you always look for the best answer.

10. Beware of clues that are too obvious.

11. Know if you can mark in your test booklet.

12. Use an elimination process to help you to find the best answer. Put a "slash" through answers that you know are incorrect and a "?" by possible answers. This will save you the time of going back through all of the choices before making a decision.

13. Mark your booklet with a large "x" next to each completed question.

14. Don't be afraid to go back to check and possibly change an answer.

B. SAT and PSAT/NMSQT

1. The SAT and PSAT/NMSQT are multiple choice tests made up of verbal and math sections. The verbal sections measure both your ability to understand what you read and the extent of your vocabulary. The vocabulary subscore is made up of antonym and analogy sections. The reading subscore is compiled from sentence completion and reading comprehension sections.

2. The strategies which are helpful on the SAT are also helpful on the PSAT/NMSQT.

C. Strategies for Working with Analogies

1. Know that an analogy is a problem written in the form of A is to B as C is to D (A:B :: C:D).

2. Know the main categories of analogies:

a. synonyms - cheat: deceive :: trust: believe
b. antonyms - cut: bind :: destroy: build
c. abstract to concrete -
patriotism: flag :: death:coffin
d. cause and effect - rain: growth :: sun: heat

e. degree of intensity - big: colossal :: dark: ebony
f. class to species - car: Volvo :: dog: Doberman
g. part to whole - window: house :: zipper: pants
h. use - hammer: nail :: scissors: cloth
i. large to small -
whale: dolphin :: condor: hummingbird

3. Make a sentence out of the analogy to help you select the best answer.
   ex. A whale is a large marine mammal : a dolphin is a small marine mammal :: A condor is a large bird : a hummingbird is a small bird.

4. You must understand the relationship of the first pair of words in order to determine the analogy.

5. Be aware of the order of the terms. (Tree:Trunk :: Car:Chassis, <u>but not</u> Tree:Trunk :: Chassis:Car)

6. Watch for grammatical clues. (Building:Tall ::Train: Long, <u>but not</u> Building:Tall :: Train: Speed)

7. Read all of the options before deciding on an answer.

8. When practicing analogies it is beneficial to go over the explanation for the analogy even if you have the correct answer.

D. Strategies for Teaching Analogies

1. Use the SAT format (A:B :: C:D).

2. Begin with easy analogies that the students will be successful with before introducing the more difficult ones.

3. Try an analogy a day for a part of the year.

4. Introduce the analogies by categories. (See types, C. 2. above.)

5. Don't just do one unit on analogies. Brief lessons throughout the year will be more beneficial.

6. Work with analogies should include time for student response and discussion of the thought processes which are implicit in an analogy. It is most important that the students be required to give an explanation of their answers instead of just concentrating on determining a right answer.

7. Help students to create their own analogies. Words may come from their vocabulary lesson, classwork, or from their daily experiences, using names of foods

and titles or personalities from popular culture to provide additional motivation.

E. Strategies for Working with Antonyms

1. Be aware of the part of speech used. The opposite (antonym) must be the same part of speech. (The opposite of slow is fast, not speed.)

2. If the word has a positive connotation, its opposite must have a negative connotation. (The opposite of lively is dull, not peaceful.)

3. Don't choose an antonym that is too broad or too limited to be an opposite.

4. If you do not know or are not sure of the dictionary meaning of a word but feel you know how the word should be used, try to think of a phrase or sentence using the word. This may help you choose the opposite.

5. Learn to break words down into prefixes, suffixes, and roots whenever possible.

6. To do well on a test of antonyms, you must be able to understand meanings of words and distinguish between fine shades of meaning.

7. To give yourself a better idea of how words can have different meanings, read books or magazines on subjects with which you are not familiar.

8. Use Reader's Digest "It Pays to Increase Your Word Power."

9. In a variety of ways, illustrate antonyms. Draw pictures, make collages, or otherwise depict relationships.

10. Create antonym and synonym banks for use in writing.

11. Realize some words do not have true antonyms. The test taker must deal with the concept of opposite or most nearly opposite.

F. Strategies for Teaching Antonyms

1. Make students aware of the use of antonyms on the SAT. Too often, the students will look first for synonyms.

2. Warn students that synonyms are often used as distractors on test items.

3. Make up crossword puzzles using antonyms.

4. Show how forms of words are often changed to make antonyms:
   a. prefixes (ex. progress/regress)
   b. suffixes (ex. worth/worthless)
   c. shift in gender (ex. hero/heroine)

5. Have students create oxymorons.
   Examples: sweet sorrow
   cruel kindness
   clean bomb
   make haste slowly

6. Have students create rhyming opposites.
   Wet is to dry as laugh is to cry.
   Up is to down as smile is to frown.

7. Give a vocabulary word for the day. Have students give an antonym for the word and use the original in a sentence to show meaning.

8. Give pairs of words and have students identify pairs as antonyms or synonyms.

9. Keep up with new words from contemporary society, especially words that are not yet in the dictionary. Use them in classroom activities.
   Examples: debrief, wipe-out

10. Use student-created word games for class activities.

11. Encourage students to look for multiple meanings of words. Give students sentences to illustrate multiple meanings.
    Example: John liked to sport his new hat, but he was not a good sport when others would sport about the absurdity of wearing a hat while playing a sport.

12. Emphasize the study of Latin as a major influence on vocabulary.

13. Use antonyms on vocabulary tests.

G. Strategies for Working with Sentence Completions

1. Sentence completion tests your ability to complete sentences while retaining the meaning of the sentences. This is done by recognizing relationships among parts of a sentence.

2. Be familiar with the test format. There may be one or two deletions. Examples:
   a) In pursuing his fate, man is the _____ of his fate.
   b) Man's survival is a result of mutual assistance since he is essentially a _____ rather than a _____ being.

3. Read the sentence completely, trying to get the main idea of the sentence.

4. Before looking at the choices, try to think of a synonym that would fit in the blank.

5. Look for key words as clues:
   always, all.....allow for no exception
   and, so, because.....a relationship will be explained
   but, however.....shows dissimilarity

6. Analyze structure - is it contrast, definition, or explanation?

7. When two words are missing, try to complete the second term first.

8. Make sure choices are grammatically consistent with the rest of the sentence.

9. After selecting your answer read the entire sentence to make sure it makes sense.

H. Strategies for Teaching Sentence Completion

1. Use sentence completion format on tests.

2. Time students on sentence completion questions, using the SAT format.

3. Always discuss the answers and the reasoning for particular choices.

4. Try a sentence completion a day for a part of the year. Example sentences may be culled from literary works, magazine articles, students' papers, or SAT sample tests.

5. Have students create their own sentences. They can use personal experiences or relate it to material in class.

I. Reading Comprehension

1. Several types of questions are commonly asked on Reading Comprehension sections of tests.

   Examples of types:
   - Main idea
   - Ideas stated directly, specific details, supporting details, literal recall of information
   - Application of the author's principles or opinions (political essays, editorials)
   - Inference
   - Evaluation according to the way the author develops and presents logic, organization, attitude, tone, language, point of view, generalization

   These questions may be based on the passage as a whole, based on one or more specific sections of the passage, or based on particular words, phrases or sentences.

2. Comprehension questions usually follow a typical recurring pattern. Following are examples of the type of wording commonly found on the SAT.

   a. Main idea - What is the passage trying to tell you? ("Which of the following best states the main point....?" "The author concentrates primarily on ....")

   b. Inference - What can you infer from the passage? ("It can be inferred that...")

   c. Summary - In a few words how would you describe the passage? ("Which of the following would be the most appropriate title?" "From the passage as a whole,...")

   d. Tone or Mood - What is the tone or mood of the passage? ("The tone of the author's discussion of ... can best be described as..." "As the passage progresses, its tone shifts from...")

   e. Stated ideas - Can you find a specific reference to a stated idea? ("According to the passage..." "According to the author...")

   f. Implications - What is implied by a section of the passage? ("The author suggests..." "The author implies that...")

g. Meaning of a word or phrase - What is the meaning of a specific word, phrase, or sentence in the passage? ("The ...in the final sentence is the need for ..." "By this...the author means...")

J. Test Taking Strategies for Reading Comprehension

1. Read non-fiction selections from newspaper editorials, political columns or magazine articles.

2. Practice reading selections in 3-6 paragraph (200 - 500 word) sections, the approximate length of an SAT passage. Keep in mind the question types previously mentioned. Students can make up questions on the reading, using the multiple-choice SAT format. (See Chapter II of this guide.)

3. Many people recommend reading the questions before reading the passage.

4. Remember that Reading Comprehension passages are usually not arranged in order, from easy to difficult. Often, long passages present relatively easy content, while shorter passages contain difficult material.

5. Use the test booklet for scratchwork. Mark principle ideas, facts, and organization.

6. Read the passage closely and look for evidence in the passage to support your choices. Follow the author's reasoning. Notice information relating to ideas presented. Note attitude, tone, and general style.

7. Familiar or interesting subjects may be easier. Skip difficult passages and go on. Return to difficult passages later.

8. Answer questions on the basis of what is implied or stated in the passage. Don't answer questions on the basis of personal opinion or knowledge.

9. Questions that ask the <u>most</u> likely or <u>least</u> likely require careful distinctions to be made between choices that are partly correct and those that are more complete or more accurate.

10. When answering main idea questions, don't be distracted by statements that are true according to the passage but that are secondary to the central point.

11. Reading Comprehension questions are not discrete items (separate and distinct in themselves) as the other items are. They are associated with the reading comprehension passage.

K. Teacher Strategies for Reading Comprehension

1. Emphasize different reading rates. Students must understand that they should not have a single rate of reading. They need to develop flexibility in their reading and adjust their rate to the situation.

a. When to reduce speed
- unfamiliar terms
- difficult technical vocabulary and material
- difficult and detailed directions
- there is a need for retention
- it is necessary to shift from the text to diagrams
- when the writing is artistic

b. When to increase speed
- materials are simple or familiar with few new ideas
- examples and illustrations are unnecessary for understanding
- a detailed explanation is unneeded
- previous ideas are restated
- when material is given only for main points and ideas

c. Give students opportunities to be aware of and practice different types of reading. Show them how to skim and scan material for information.

2. Give practice on all levels of questioning, using student-generated items as well as teacher-made or commercially prepared materials.

a. Refer to Chapter II of this guide for specific questioning techniques, which encourage higher levels of critical thinking.

b. Brevard's new literature textbooks contain excellent critical questioning material. To derive maximum efectiveness from the questions, however, the teacher should stress the processes of thought involved, rather than emphasizing the "right answer."

L. Strategies for Taking the Test of Standard Written English

1. The content of this test includes the same kinds of errors encountered in student writing. Students are tested on the ability to recognize these errors.

2. Some items test knowledge of grammatical principles such as:

   a. subject - verb agreement
   b. parallel structure
   c. avoidance of double negative
   d. pronoun - antecedent agreement
   e. correct case of pronouns

3. Some items recognize knowledge of sentence structure including:

   a. long sentence fragments
   b. use of subordination
   c. use of the semi-colon

M. Strategies for Teaching the Test of Standard Written English

1. The Test of Standard Written English contains longer and more complex sentences than students usually write. It is suggested that teachers encourage more non-narrative selections for supplementary reading.

2. Teacher response to compositions should include suggestions to help students use subordination, parallelism, and other stylistic elements which will improve writing (and also improve students' recognition of such elements on the TSWE).

3. Administer practice tests of TSWE from "Taking the SAT" booklet. Go over the answers, including a discussion of <u>why</u> an answer is considered correct. This will help to diagnose individual needs. The teacher may choose to review areas that are missed by a large number of students. Individual students should review missed answers that the majority of students answered correctly.

4. When responding to compositions, a teacher might include "SAT" as a correction symbol to indicate an error on an SAT skill.

5. This test does not require students to identify specific terms or structures of grammar. Therefore, it is desirable to concentrate on the application of advanced grammatical principles in the students' own writings.

N. American College Test

1. The English Usage and Grammar section of the ACT tests a student's ability to diagnose mistakes in English usage and grammar, and to choose a reworded version which is correct. The Natural Science and Social Science sections test the ability to accurately read and understand passages. These tests ask questions on the content of the passages as well as the interpretation of the passages based on the student's knowledge of the topic.

2. Knowledge and skills learned over the years are the best preparation for the ACT and they are not acquired in a short amount of time. Cramming isn't advised. However, a systematic and comprehensive review of the ACT skills may be helpful.

3. Unlike the SAT, the ACT has no penalty for guessing. Therefore, students should answer every question, eliminating as many choices as possible before making a selection.

4. Students may mark in their test booklets. Page 4 of this guide offers suggestions concerning effective marking.

5. To prepare students for the English Usage and Grammar section of the ACT, review the following:

   - rules of grammar and punctuation
   - parts of speech
   - various sentence structures
   - paragraphing
   - logical presentation of ideas

6. Practice recognizing these common types of errors:

   -sentence fragments and run-ons
   -errors in subject-verb agreement
   -errors in parallelism
   -errors in mood and tense of verbs
   -errors in case of pronouns
   -misplaced or dangling modifiers
   -phrases placed too far from the word/words that they modify

7. Unlike the SAT that has single sentences, the ACT language section is made up of passages.

8. For each question pertaining to the passage, the student is offered four choices, the first of which is generally "no change," to be used if the underlined portion is correct.

9. For specific strategies, refer to the SAT sections of this chapter.

10. In the Natural Science and Social Studies reading sections, students may be asked to:

-select a title
-select the author's purpose
-recognize the writer's style and mode of reasoning
-indicate whether an author would agree or disagree with a particular statement.
-apply the ideas in the reading selection to a new situation
-make inferences, analogies, and evaluations

0. Advanced Placement English

1. The AP examination provides a standardized method of evaluating students' achievements and reporting them to colleges. The test includes both objective and essay sections which measure students' ability to read prose and poetry. The exam stresses analytic skills, ability to synthesize, ability to "think on the spot," and advanced composition skills.

2. Strategies for Taking the Advanced Placement English Test

a. Make very sure you understand what is called for in the question. Reread it several times, underlining key words of instruction. Pay attention to special warnings, such as "Avoid plot summary," and heed these directions.

b. Make a skeletal outline before you begin to write your essay answers, in order to assure logical progression from thesis statement to conclusion. Keep your answer directed to the question, using key words or key concepts in your essay. Make sure your evidence or support is relevant. Do not pad your essay with redundancy. Keep your conclusion brief and do not belabor the points you wish to stress.

c. Store in your mind at least two twentieth century novels of literary merit with which you are most familiar. Make sure you have clearly in your mind the titles, authors, opening paragraphs, characters, inner or outer conflicts, themes, and any prominent stylistic devices or thematic implications. It is much better to be extremely knowledgeable of two novels than to be slightly knowledgeable of ten.

d. Store in your mind at least two modern dramas of literary merit with which you are most familiar. Know the titles, authors, opening and closing scenes, characters, which conflicts are present, themes, production devices and thematic implications. Make sure you select plays by different authors; it will be more profitable for you to know one play by Ibsen and one by Williams, for instance, than two plays by one author.

e. Store in your mind at least two plays by William Shakespeare. One tragedy and one comedy or historical play would be advisable. Know the settings, major characters, rising and falling action, as well as opening and concluding scenes. Do not use terms such as "soliloquy" or "comic relief" unless you are definite in your understanding of their purpose.

f. Be confident of your reading comprehension skills in nonfiction. If such a selection is included in the AP test, read it carefully, always looking for main ideas, central images, allusions, point of view and tone. Underline those lines which reveal these elements.

g. Make sure your background in poetry is strong enough that you are comfortable with this genre. Include line numbers when you use them as reference in your essay. Be aware of any poetic devices that may appear in the poem you are asked to write about. Reread the poem until you feel comfortable with its meaning.

h. Come to the test location rested and mentally alert. Do not spend your final class days cramming; this approach will only add to the apprehension of the test. It is better to spend your time strengthening your already strong areas, than trying to learn new information at this point.

i. Write your answers as legibly and as intelligently as you know how. You do not want to antagonize your AP reader with sloppy penmanship, grammar or spelling, although these are not predominant in the criteria for your score.

j. Know that you are well-prepared for the test if you have done well on your class assignments. You are as capable of success as any other high school student who is taking this test at this same moment.

P. Test Taking Strategies for the Assessment of Skills for Successful Entry and Transfer (ASSET)

1. The Language Usage Section of this test includes 16 sentences, each of which has four underlined parts. The student must identify the underlined parts as correct (C) or incorrect (I).

2. Mechanical elements which are tested include:

- capitalization
- punctuation
- spelling
- subject-verb agreement
- pronoun-antecedent agreement
- common usage errors (its, it's; sit, set; etc.)
- sentence structure

3. The Reading Section of ASSET has five 130-200 word passages, each followed by eight questions. The passages are taken from non-fiction business and career sources.

4. Questions on the readings ask for details, inference, and limited application.

5. The Advanced Language Usage Section of ASSET consists of five 150-200 word passages in which certain words and phrases are underlined and numbered. These passages are of academic content, at a level commensurate with college textbooks.

6. Students must select "No Change" or choose a better phrasing from among three alternatives.

7. Students need to recognize advanced elements of standard written English such as:
- use of transitions
- consistency of tone and style
- subordination
- parallelism
- wordiness and redundancy

RESOURCES FOR TEST TAKING STRATEGIES

ACT Program Booklet. American College Testing, Iowa City, Iowa.

Bobrow, Jerry and Covino, William. (1982) Cliff's SAT Prep Guide. Cliff's, Incorporated.

Gruber, Gary R. (1982) Inside Strategies for the SAT. Educational Design, Inc., New York

Kovac, Reed and Strobel (1984) Advanced Placement English. The Center for Learning, William C. Brown Publishing.

PSAT/NMSQT Testing Booklet. Educational Testing Services, Princeton, New Jersey.

Strategies and Applications for Teaching SAT Skills (1984). Charlotte-Mecklenburg Public Schools, Charlotte, North Carolina.

Taking the SAT (1984). College Entrance Exmination Board, Princeton, New Jersey.

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"Judge a man by his questions
rather than by his answers."
Voltaire

Questioning Strategies

Questioning skills play a major part in the effectiveness of instruction in critical thinking skills. Questioning gives students the opportunity to articulate their thoughts, to render opinions and evaluations, to interact among themselves, and to benefit from the divergent thinking of others. Of course, questioning also gives the teacher valuable information about student comprehension and learning. Finally, used only to solicit low-level recall of information and as punishment for failure to complete assigned reading, questioning can stifle learning.

This chapter includes extensive practice with concepts of questioning which are related to the five cognitive levels identified by Benjamin Bloom. (Bloom's sequential model is only one of many questioning hierarchies which have been developed.) Becoming familiar with the varying levels of thought will help the teacher phrase questions which elicit critical thinking from students both on written tests and in classroom discussions.

Since the end result of effective teaching is an autonomous learner, we have included a section on student-generated questioning. In an atmosphere which values the exchange of ideas, students can learn how to create questions which enable them to get to the heart of new material. By generating test items, they can also acquire skills needed in taking standardized tests.

Following is a survey which highlights some of the attitudes necessary for encouraging critical thinking.

Am I An Inquiring Teacher?

1. Do I encourage my students to develop the ability to judge the value of a material for a given purpose and require them to provide support based on definite criteria?

2. Do I lead my students to combine and organize portions of information to solve a problem with major emphasis on the formulation of new patterns or structures?

3. Do I require students to break down material into its component parts so that both the content and the organizational structure may be understood?

4. Do I encourage students to use learned materials in new and concrete situations?

5. Do I emphasize the ability of students to grasp the meaning of material beyond simple recall?

6. Do I focus on requiring students to recall previously learned facts and theories?

7. Do I encourage many different responses to a given introductory stimulus and come prepared to deal with alternative patterns of exploration?

Questions such as these remind us that learning is more than a classroom demonstration of acquired knowledge. Until knowledge is integrated with experience, until it is acted upon by thought, nothing permanent has taken place.

According to Bloom, there are levels of thinking that range from memory response at the lowest level to critical, creative, and evaluative thinking at the highest levels. On page 21 is a chart of Bloom's Taxonomy, which lists the levels of thinking and the characteristics that identify each. By referring to this chart, with its examples of instructional objectives and behavioral terms, a teacher will be better able to plan lessons and ask questions which promote all levels of thinking.

The following "curriculum fable" and the questions which follow it will serve to demonstrate the ways in which questions may be designed to elicit varying levels of thought. While answering the questions, refer to Bloom's Taxonomy. Think about the different types of questions and the ease with which each question can be answered.

BLOOM'S TAXONOMY

TABLE I. Major Categories in the Cognitive Domain of the Taxonomy of Educational Objectives

Descriptions of the Major Categories in the Cognitive Domain
1. Knowledge. Knowledge is defined as the remembering of previously learned material. This may involve the recall of a wide range of material from specific facts to complete theories, but all that is required is the bringing to mind of the appropriate information. Knowledge represents the lowest level of learning outcomes in the cognitive domain.
2. Comprehension. Comprehension is defined as the ability to grasp the meaning of material. This may be shown by translating material from one form to another (words to numbers), by interpreting material (explaining or summarizing), and by estimating future trends (predicting consequences or effects). These learning outcomes go one step beyond the simple remembering of material and represent the lowest level of understanding.
3. Application. Application refers to the ability to use learned material in new and concrete situations. This may include the applications of such things as rules, methods, concepts, principles, laws, and theories. Learning outcomes in this area require a higher level of understanding than those under comprehension.
4. Analysis. Analysis refers to the ability to break down material into its component parts so that its organizational structure may be understood. This may include the identification of the parts, analysis of the relationships between parts, and recognition of the organizational principles involved. Learning outcomes here represent a higher intellectual level than comprehension and application because they require an understanding of both the content and the structural form of the material.
5. Synthesis. Synthesis refers to the ability to put parts together to form a new whole. This may involve the production of a unique communication (theme or speech), a plan of operations (research proposal), or a set of abstract relations (scheme for classifying information). Learning outcomes in this area stress creative behaviors, with major emphasis on the formulation of new patterns or structures.
6. Evaluation. Evaluation is concerned with the ability to judge the value of material (statement, novel, poem, research report) for a given purpose. The judgments are to be based on definite criteria. These may be internal criteria (organization) or external (relevance to the purpose) and the student may determine the criteria or be given them. Learning outcomes in this area are highest in the cognitive hierarchy because they contain elements of all of the other categories, plus conscious value judgments based on clearly defined criteria.

TABLE II. Examples of General Instructional Objectives and Behavioral Terms for the Cognitive Domain of the Taxonomy

Illustrative General Instructional Objectives	Illustrative Behavioral Terms for Stating Specific Learning Outcomes
Knows common terms Knows specific facts Knows methods and procedures Knows basic concepts Knows principles	Defines, describes, identifies, labels, lists, matches, names, outlines, reproduces, selects, states
Understands facts and principles Interprets verbal material Interprets charts and graphs Translates verbal material to mathematical formulas Estimates future consequences implied in data Justifies methods and procedures	Converts, defends, distinguishes, estimates, explains, extends, generalizes, gives examples, infers, paraphrases, predicts, rewrites, summarizes
Applies concepts and principles to new situations Applies laws and theories to practical situations Solves mathematical problems Constructs charts and graphs Demonstrates correct usage of a method or procedure	Changes, computes, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses
Recognizes instated assumptions Recognizes logical fallacies in reasoning Distinguishes between facts and inferences Evaluates the relevancy of data Analyzes the organizational structure of a work (art, music, writing)	Breaks down, diagrams, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, points out, relates, selects, separates, subdivides.
Writes a well organized theme Gives a well organized speech Writes a creative short story (or poem, or music) Proposes a plan for an experiment Integrates learning from different areas into a plan for solving a problem Formulates a new scheme for classifying objects (or events, or ideas)	Categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes
Judges the logical consistency of written material Judges the adequacy with which conclusions are supported by data Judges the value of a work (art, music, writing) by use of internal criteria Judges the value of a work (art, music, writing) by use of external standards of excellence	Appraises, compares, concludes, contrasts, criticizes, describes, discriminates, explains, justifies, interprets, relates, summarizes, supports

BEST COPY AVAILABLE

"A Curriculum Fable"

One time the animals had a school. The curriculum consisted of reading, climbing, diving, flying, and swimming - and all of the animals took all of the subjects.

The Duck was good in swimming - better, in fact, than his instructor - and he made passing grades in flying, but he was practically hopeless in running. Because he was low in this subject, he was made to stay in after school and drop his swimming class to practice running. He kept this up until he was only average in swimming - but average was acceptable; so nobody worried about this except the Duck.

The Eagle was considered a problem pupil and was disciplined severely. He beat all of the others to the top of the tree in the climbing class, but he had used his own way of getting there.

The Rabbit started at the top of the class in running, but he had a nervous breakdown and had to drop out of school because of so much make-up work in swimming.

The Squirrel led the climbing class, but his flying teacher made him start his flying lessons from the ground instead of from the top of the tree down, and he developed a charleyhorse from over-exertion at the take-off and began getting C's in climbing and B's in running.

The Practical Prairie Dogs apprenticed their offspring to a Badger when the school authorities refused to add digging to the curriculum.

At the end of the year an abnormal Eel that could swim well, run, climb, and fly a little was made Valedictorian.

-Anonymous

A CURRICULUM FABLE - DISCUSSION QUESTIONS

COGNITIVE DOMAIN LEVELS

1. KNOWLEDGE (recall of specifics)
   What was the Eagle's best subject?
   Who had to drop out of school because of a nervous breakdown?

2. COMPREHENSION (lowest level of thought)
   Explain why the prairie dogs were called "practical."

3. APPLICATION (use of ideas, theories)
How would you relate the curriculum to the rabbit's condition?

4. ANALYSIS (breaks material into component parts; discriminates, infers, relates)
What characteristics of the school allowed the Eel to become valedictorian?

5. SYNTHESIS (arranging elements to constitute new patterns)
How might the philosophy of the animal school have been constructed so as to allow the Eagle to be valedictorian?

6. EVALUATION (use of standard of appraisal, internal and external)
Compare the strengths and weaknesses of the status quo in most schools as highlighted by the fable.

The following items illustrate how Bloom's Taxonomy can be applied to test questions written for a literary selection. It should be noted that the wording of the question will determine the thinking level required to answer the question. For example:

a. Which of the following statements is most clearly an example of _____? (application)
b. Which of the following statements do you think is most clearly an example of _____? Support your answer with evidence from the passage. (evaluation)

Both of the preceding questions call for essentially the same knowledge. However, the addition of "Do you think" and "Support your answer" raises the level of thought required to answer the question from application to evaluation.

It should be pointed out that simply having the students reiterate a teacher-given "correct" answer will lower the level of thinking required to answer the question.

The following sample test questions from Fitzgerald's The Great Gatsby illustrate how Bloom's Taxonomy can be applied to a literary selection.

Evaluation: It is doubtful that Daisy would have left Tom for Gatsby because she had a _____and she valued _____.

A. daughter . . . upper class status
B. fortune . . . independence
C. housekeeper . . . luxury
D. masochistic urge . . . punishment
E. son . . . family stability

Multi-Level: Read the following passage and answer the questions at the end.

> Most of the big shore places were closed now and there were hardly any lights except the shadowy, moving glow of a ferryboat across the Sound. And as the moon rose higher the inessential houses began to melt away until gradually I became aware of the old island here that flowered once for Dutch sailors' eyes - a fresh, green breast of the new world. Its vanished trees, the trees that had made way for Gatsby's house, had once pandered in whispers to the last and greatest of all human dreams; for a transitory enchanted moment man must have held his breath in the presence of this continent, compelled into an aesthetic contemplation he neither understood nor desired, face to face for the last time in history with something commensurate to his capacity for wonder.
>
> And as I sat there brooding on the old, unknown world, I thought of Gatsby's wonder when he first picked out the green light at the end of Daisy's dock. He had come a long way to this blue lawn, and his dream must have seemed so close that he could hardly fail to grasp it. He did not know that it was already behind him, somewhere back in that vast obscurity beyond the city, where the dark fields of the republic rolled on under the night.
>
> Gatsby believed in the green light, the orgiastic future that year by year recedes before us. It eluded us then, but that's no matter - tomorrow we will run faster, stretch out our arms farther...And one fine morning - -
>
> So we beat on, boats against the current, borne back ceaselessly into the past.

Comprehension: "Borne back ceaselessly into the past" is an example of

A. foreshadowing
B. metaphor
C. paradox
D. satire
E. hyperbole

Synthesis: The best title for this passage would be

A. The Long Way Out
B. Winter Dreams
C. Daisy
D. Lights of the Harbor
E. Harbor Changes

NOTE: Passages of this length are recommended on teacher-made tests because they reinforce students' critical reading habits. Obviously, several other questions could be generated by this passage.

In many cases with higher level questions, students' answers will vary. The teacher must encourage students to verbalize their thought processes to discover how they arrived at an answer. The whole point of asking synthesis and evaluation level questions is missed if the emphasis always remains on one "right answer" for every question.

Analysis: Gatsby is NOT described as being a(n)

A. person who does not want trouble with anybody
B. murderer
C. role model for Nick
D. American soldier
E. German spy

Application: Gatsby : Recapturing the Past::

A. Columbus : ~~Sailing~~ West
B. Icarus : Flying from Crete
C. Neil Armstrong : Walking on the Moon
D. Orville Wright : Flying at Kitty Hawk
E. Ulysses : Returning to Ithaca

Comprehension: Gatsby was not only

A. wealthy but shrewd
B. unscrupulous but humble
C. naive but practical
D. realistic but enterprising
E. popular but self-confident

Knowledge: According to Nick Carraway, Gatsby was

A. a bootlegger
B. the only honest person
C. a liar
D. interested only in parties
E. a fortune-hunter

PRACTICE ACTIVITY

Read the following questions. Using Bloom's Taxonomy, decide which cognitive level could be assigned to each question. Be able to support the decision.

Practice A

1. Where had the three bears gone when Goldilocks came?
2. Role play Goldilocks taking the porridge and Papa Bear seeing her.
3. What did Goldilocks mean when she said, "just right"?
4. Make up a character and write a story in which the character visits an animal's home.
5. Do you think Goldilocks was a thief? Why or why not?
6. For each of the characters in the story, list five words that would describe the character.

Practice B

1. Name the five senses.
2. Tell the function of each of the five senses.
3. If you were lost in the woods, how would you use your five senses?
4. Categorize this word list under the most appropriate function of the five senses.
5. Write a story about a person who loses one of his senses.
6. Which sense do you feel is most important? Justify.

Suggested* Answer Key - Test A

1. Knowledge
2. Application
3. Analysis
4. Synthesis
5. Evaluation
6. Comprehension

Suggested* Answer Key - Test B

1. Knowledge
2. Comprehension
3. Analysis
4. Analysis
5. Synthesis
6. Evaluation

*Suggested, because teachers may be able to support different interpretations

SAMPLE QUESTION STEMS

The following question stems will serve as a reference when writing test items at varying cognitive levels.

1. Main Idea:
   a. The author is mainly concerned with. . . (analysis)
   b. Which of the following would be the best title for the passage? (analysis)

2. Supporting Detail:
   a. The author mentions all of the following as disadvantages of _____ EXCEPT.....(knowledge)
   b. Which of the following statements is supported by the passage? (comprehension)

3. Inference:
   a. From this passage it can be inferred that.... (analysis)
   b. The author would probably have the least pity for... (analysis)

4. Use of Ideas:
   a. Which of the following statements is most harmonious with the principles of ... as described in the passage? (application)
   b. Which of the following statements is most clearly an example of _____? (application)

5. Clarifying Devices
   a. In this passage facts are presented in order of... (analysis)
   b. The _____ is a simile for _____. (analysis).

6. Vocabulary in Context:
   a. The best antonym for _____ as used in this passage is _____. (application)

7. Judging Logic
   a. The author agrees with _____'s statement because it is _____. (analysis)
   b. The author's argument is strengthened by the fact that he _____. (evaluation)
   c. Which of the following statements do you think is most clearly an example of _____? Explain why. (evaluation)

8. Style and Tone:
   a. The author's attitude toward _____ could best be described as _____. (synthesis)
   b. I _____ the author's attitude toward _____because _____. (evaluation)
   c. The style of this passage is primarily _____ because _____. (evaluation)

EXPLANATION OF STEM TYPES

1. Main Idea: This type of question relates to the major topic or main intent of the passage. The student is to select the best summary of the passage's subject or to choose the best description of the author's purpose in writing the passage. Awareness of the central concern of a block of material as as a whole is tested.

2. Supporting Detail: Facts and information explicitly mentioned in the passage are probed by the "supporting idea" questions. The student is asked what the passage states about specific issues and problems.

3. Inference: The "intended inference" question investigates the student's understanding of information implicit in the passage but not directly stated. This requires a slightly more sophisticated level of reading ability and an insight into subtleties of expression.

4. Use of Ideas: This item type deals with the ability to relate information and ideas extracted from the passage to the realm of general experience external to the passage. Typical questions seek an example of a situation described in the passage, a statement compatible with the principles expounded in the passage, or a projection based on information within the passage.

5. Judgment of Logic: In evaluating the logic of a passage, the student must explore the "how" and "why" of the author's presentation. This item type requires recognition of logical consistency, sound reasoning, and effective argumentation.

6. Style and Tone: Awareness of an author's tone and style of expression is vital to an understanding of the "spirit" or general tenor of a passage. This type of question attempts to get at the author's attitude underlying his presentation and his approach to the subject matter at hand.

POST TEST ON BLOOM'S TAXONOMY

Directions: Read each of the following questions. Using the chart of Bloom's Taxonomy, decide which category in the cognitive domain correlates with each question. Answers will vary. Suggested answers are given, together with supporting explanations.

1. What is the most significant scene in Hamlet? Support your answer.

2. Select the answer for questions 1 - 5 by referring to the graph.

3. Sum up in one sentence what you think Steinbeck was trying to say in The Grapes of Wrath.

4. Match the correct statement letter with the corresponding principle number.

5. Tell whether each of the statements following the fact is:
   a. a cause of the fact
   b. a result of the fact
   c. not related to the fact

6. Devise a plan to study whether students who go to church every week are better students than those who do not.

7. Now that we have studied the topic for some time, see if you can apply your understandings to these new situations.

8. Describe the fallacies in reasoning in this statement:___

9. Analyze the reasoning of the people who made these statements.

10. Indicate whether each of the following is a "fact," a "value," or an "opinion that is not of value."

Suggested Answers

1. Evaluation: At first glance, the question could be considered comprehension, because it requires grasping the meaning of the material. However, the reader is asked to discriminate among the scenes of Hamlet, and to make a judgment as to which is the most significant.

2. Comprehension: This question requires the student to translate material from one form (graph) to another (written).

3. Comprehension: The student is asked to interpret material in a summary form that does not require analysis or evaluation.

4. Knowledge: The student need only recall appropriate information.

5. Analysis: The student must determine a relationship among component parts.

6. Synthesis: If students were merely asked to desribe such a study, it would be a knowledge-level question. Since the student must create a plan, it calls for a higher level of thinking.

7. Application: The student must use learned material in new and concrete situations.

8. Evaluation: Although the question uses a knowledge-level verb (describe), it requires judging the logical consistency of material based upon definite criteria.

9.Analysis: The student must break down the reasoning of various statements, including the assumptions, conclusions, and supporting facts.

10. Evaluation: The student must judge the value of material for a given purpose.

ORAL QUESTIONING STRATEGIES TO ENHANCE CRITICAL THINKING

Critical thinking skills can be enhanced in the English classroom by combining Bloom's levels of thinking, Ted Forte's oral questioning strategies, and the resources of the literature textbook.

Bloom's taxonomy includes: knowledge, comprehension, application, analysis, synthesis, and evaluation. The teacher can be aware of higher level types of questions and try to avoid use of only knowledge and comprehension questions. It is important to keep in mind that any higher-level question, such as "What is the most significant scene in Hamlet and why?" becomes a knowledge-level question if the teacher has already told the class, "The most significant scene in Hamlet is the one where Hamlet has an opportunity to kill his uncle but does not do so." There is a crucial difference between searching for the right answer and exploring for a logical answer.

A list of sample question stems is printed on page 27. The teacher may want to keep this chart handy during class discussion and refer to the examples to try to raise the overall level of questioning in the class. Knowledge and comprehension questions have a valid place in the classroom; however, oral questioning should not be limited to those categories.

The concept of "wait time" is important in classroom oral questioning. Most teachers allow only a brief moment after a question is asked for students to formulate an answer. A five-second wait has been shown to elicit longer and more detailed answers. Especially when higher-level answers are required, students need time to process questions and develop answers.

Student discussion groups can be used to enhance critical thinking skills in oral questioning. The teacher can ask an analysis, synthesis, or evaluation question or several questions to the entire class, let groups of three or four work out their answers, and then discuss all the answers. The process of thinking through an answer and talking about possibilities, together with labeling of the thought processes which are used (categorizing, inferring, comparing, etc.) leads students to a greater awareness of critical thinking skills.

With higher level questions, students' knowledge of thought processes - their own and others' - is just as important as achieving a "right answer." The teacher should help students to identify thinking skills such as: making analogies, generalizations and inferences; classifying information; comparing and contrasting; and identifying cause and effect. (See Chapter VI, "Logic," of this guide for further discussion of individual thinking skills.)

The following is our adaptation of Ted Forte's techniques on questioning (Teaching Effectiveness Model), with definitions and explanations drawn from his printed material and seminars and examples developed by the writers of this guide. The first four techniques are useful in initiating class discussion. The last three are intended to improve the response of a particular student.

A. Signal - Give students a choice of answers; then require responses from each member of the total group. Have students show their selection of the first, second, third, or fourth choice by showing that number of fingers; they can use "thumbs up" for agreement, "down" for disagreement or to the side for "not sure"; they can raise a hand when answers are correct; etc.

> "As I give you the following titles of literature, give me a thumbs up if it was written in the Romantic period. If it wasn't, give me a thumbs down." (Knowledge)
>
> "Define 'courage'... Nancy?" . . . "Now, if you agree with Nancy's definition, raise your hand." (Comprehension)
>
> "As I say the names of the following writers, raise your hand if you think the writer illustrates the Puritan ideal." (Application)
>
> "As I read the following poem, raise your hand each time you hear a word that you think is onomatopoeic." (Application)

Signaling is especially helpful in reviewing the previous day's work or in reviewing for a test. It is a method of checking for understanding. Usually you will be using Knowledge, Comprehension, and Application levels of questions when you use the signaling technique.

B. Sample - Pose questions with one best answer to the group. Then solicit responses from representative members of the class. Specific feedback to responses and reinforcement is withheld until the sample is completed. Some analysis of the various responses by the teacher will help students see different thought processes at work.

> "What figure of speech is predominant in 'The Buffalo That Climbed a Tree'?" "Willie?" "Pat?" "Dan?" (Knowledge) (Don't tell them the correct answer until you've finished asking for responses.)
>
> "What form of writing is most prevalent in the Colonial period?" "Hope?" "Jerry?" "Diane?" (Knowledge)

"Which character in Spoon River Anthology is most like Granny Wetherall in 'The Jilting of Granny Wetherall'?" "Sally?" "Dick?" "Jane?" (Synthesis)

Discourage concert responses. Ask individuals for responses - volunteers and nonvolunteers alike. Don't call on a particular student until after the question is stated. This technique may utilize any level of questioning from knowledge to synthesis.

C. Redirection - Pose a question with more than one answer and do not rephrase or restate after the onset. In redirection, the teacher directs one question to several students without repeating or rephrasing. Correct and incorrect responses may be acknowledged and/or reinforced verbally or nonverbally. To use redirection effectively, four problems must be faced and solved:

1. The teacher must choose a question that offers a number of alternative answers in calling for a set of acts.

2. The teacher must refrain from repeating or rephrasing the question for each pupil.

3. The teacher must refrain from asking a question and then answering it, or expanding or clarifying a student's answer so that it is more acceptable.

4. The teacher must refrain from repeating every pupil's answer. Occasional repeating should be done, most certainly when key concepts, generalizations, or critical attributes are given.

"Let's make a list of the characters Huck and Jim meet in their travels." "Joe?" "Bob?" (Knowledge)

"Describe the Grangerfords and their way of life." "Johnny?" "Paul?" (Comprehension)

"What do the symbols mean in The Red Badge of Courage?" "Carol?" "Mary?" (Application)

"We want to find out some of the ways that Henry changed during the war. As I call on you, please tell me one way you think he changed." "Janice?" "Everett?" "Geri?" (Analysis)

Redirection may be used with any level of question from Knowledge to Evaluation.

D. Individual or Private Response - These responses are usually written, whispered, or stated orally to the teacher so that each student is accountable for demonstrating possession of, or progress toward, achievement of the needed skills.

If a student's response does not come up to the level you are seeking, you must be prepared to help that student develop a better answer. Don't pass over to another student to answer that question. Hold the original student accountable. Passing over a student who can't answer a question is poor classroom management for two reasons: 1) The first student is likely to be left behind as the question moves on; and 2) Being told his answer is wrong without being given a chance to correct it may be a painful experience for the student.

> "We have learned some new words from the selection we just read. As I call out the five words, you write them down and give a short definition. I'll walk around while you're doing it and see how well you're doing." (Knowledge)
>
> "As you read the story 'Bernice Bobs Her Hair,' I'll walk around and ask you what values of society you see being portrayed in this story." (Evaluation)
>
> "While you're reading these three poems by Frost, write down the Romantic elements present in them. I'll come around and see how many you've found." (Comprehension)
>
> "Write down several points which you think support Hemingway's assertion that The Adventures of Huckleberry Finn is America's greatest novel." (Synthesis)

This technique can be used with any level of questioning from knowledge to evaluation; however, it is meant as a quick check for understanding, so time-consuming essays cannot be used with private response.

E. Prompting - A series of questions (actually hints), prompting is used when a student gives an "I don't know" response, a very weak response, or a partly or completely incorrect response.

If the initial question appears to be clear, then the teacher should begin prompting which is based on a series of questions that help the student develop an answer. Begin by referring to material the student already knows.

The teacher does not have to insist that the first answer is wrong. The student arrives at the correct response by systematic step-by-step questioning. Don't forget to reinforce for correct responses. After prompting, praise the final response as if it had been given first.

> After Sheri says she doesn't remember the setting for most of Faulkner's work (and you know she read the material), you might prompt by asking:
> "In what part of the United States do most of his

stories take place?" (Knowledge)
"How can you tell? Is there anything about the way people talk or the customs they practice that can tell you?" (Comprehension)
"Why did Faulkner know this place so well?" (Knowledge)
"What was the name of the place?" (Knowledge)

You might not be able to elicit the word "Yoknapatawpha" from her, but you probably could get her to say "a county in Mississippi that was like his own home county."

If a student doesn't grasp the symbolism in "When Lilacs Last in the Dooryard Bloomed," you might ask:

"What is the symbol mentioned in the title?" (Knowledge)
"What symbol gives the idea that Lincoln was like a bright light in the midst of the darkness?" (Comprehension)
"What symbol makes you think of a poet, able to speak his words and reveal his feelings?" (Comprehension)

Prompting will usually be used with knowledge and comprehension levels of questions. The goal is to start with what the student knows and lead him as far as the concept you are checking. Getting him to verbalize his thinking is important, as is the wait time of five seconds.

F. Clarification - Seeking further clarification is necessary when a student gives a response that is poorly organized, lacking detail, or incomplete. The answer is not wrong, but it does not fulfill the criterion response. It is different from prompting in the sense that it starts higher on the response continuum. Here the teacher is requesting that the pupil add information.

Clarification may also be used when the teacher thinks the student is guessing. The student is asked to supply the rationale for the answer. If the student is guessing, he cannot supply it.

When a student is asked to justify a response, the teacher should monitor the underlying rationale and correct any faulty assumptions. It may be necessary, at this point, to do some prompting if the pupil is unable to clarify the response satisfactorily.

To the question "What is propaganda?" you might get an answer like "Stuff people tell you to get you to do something." This is an inadequate response. You might want to clarify the student's ideas by asking:

"What kinds of things might people want you to do?" (Knowledge)
"What kinds of things might they tell you?" (Knowledge)
"Are they all bad things?" (Comprehension)

"How do they convince people?" (Comprehension)
"What are the methods they use?" (Knowledge)

This could lead into listing the devices and uses of propaganda.

To "How is a novel different from a short story?" you might get an answer such as "It's longer." You will want to clarify by asking:

"Why is it longer?" (Knowledge)
"What elements are more in-depth?" (Knowledge)
"How are the methods of characterization different?" (Comprehension)
"What's different about the plot development?" (Comprehension)

Although clarification begins higher on the continuum, you will usually use knowledge and comprehension questions when you clarify. Once again, five seconds of wait time is important.

Clarification questions can heighten students' awareness of the mechanics of thinking and the need for careful word choices.

G. Refocusing - Many times the teacher will receive a response that matches the criterion response. Refocusing may be used to extend the student's response by relating it to another topic that has been studied.

"We've looked at the characteristics of realistic literature. Let's see how these characteristics apply to Stephen Crane's "The Open Boat." (Application)

"Now, we know that Twain's work is very different from Crane's, yet they both are called Realists. How can this be?" (Synthesis)

"We've read The Red Badge of Courage, and it shows one view of war. How does this compare with the views on war of other writers during other periods of time?" (Evaluation)

The refocusing technique may use any level of question; usually, however, questions that relate a student response to another topic will be higher-order questions requiring applicaton, analysis, synthesis, or evaluation.

Once again, the thought processes which students display in their varied answers will be just as important as any "right" answer. During refocusing, the teacher may want to use clarification questions to expose divergent lines of thought.

As we try to integrate critical thinking into our oral questioning strategies, we can use Forte's techniques, Bloom's taxonomy, and our own knowledge of literature. Research shows

that repeating our own questions and students' answers does not encourage attentive listening skills. The verbalizing of thinking strategies and teacher probing to elicit more complete and accurate responses offer better techniques than answering our own questions just to get a correct response.

Calling only on volunteers allows many students to hide in the crowd. Allowing everyone to answer teacher questions in concert prevents the teacher from knowing who answered correctly, who answered incorrectly, and who didn't respond. Effective questioning techniques allow for practice in critical thinking skills and encourage all students to actively participate in the learning process.

STUDENT-GENERATED QUESTIONING

Teacher-initiated questions, regardless of the level of thinking which they encourage, tend to inhibit learner autonomy. Instruction which leads to question-making by students not only prods them to use higher cognitive skills, but it also gives them valuable insight into the construction of standardized tests.

Having students compose questions is one way of having them think critically about material that is read independently or covered in class. Student-generated questions may be used for study purposes, or the teacher may use them in writing a major exam for the course. Just as with a teacher-generated question, the value of this activity includes discussion of the question itself, and of the thinking processes and cognitive levels necessary to answer it.

Students can be taught test-writing techniques for vocabulary, literature, grammar, and other language arts items. Following are some suggestions for having students generate questions in the classroom (or for homework).

A. Analogy Questions:

Students will understand vocabulary words better if they try writing items involving word meanings and relationships. This also gives them a sense of ownership and relevancy, particularly if they derive these questions from everyday knowledge.

1. Teach them the analogy format (____:____::____:_____)

2. Teach them the analogy types (see p. 5 of this guide).

3. Show students how to construct analogy answers which are grammatically parallel.

4. Have students write some analogies. This is the teacher's opportunity to label critical thinking processes and help students understand the components of thinking skills.

   (See page 21 of this guide for a discussion of Bloom's Taxonomy and its relationship to vocabulary skills.)

5. Reinforce the importance of analogies on the PSAT/SAT.

6. Students should be able to write analogies about literature as well as those that use vocabulary. They will also enjoy writing casual analogies which include names of candy bars, rock groups, TV shows, etc.

7. Once again, the value of this activity lies in the articulation of the process used by the question writers, as well as the question answerers.

8. Students should be encouraged to recognize the cognitive level of their analogies. Which items are easier than others, and why?

B. Sentence completion questions

1. Have students original sentences using vocabulary words.

2. Have students choose well-known quotations and omit two words.

3. Students may use a sentence from a literature passage, omitting two words.

4. All items must include five sets of words as answer choices (like verbal items on the PSAT/SAT).

C. Cognitive Levels of Student-Generated Questions

Students should be encouraged to generate questions which require analysis, synthesis and evaluation, as well as the more obvious questions at the knowledge and comprehension levels.

Refer to Bloom's Taxonomy (page 21 of this guide), explaining to students that most questions missed on the PSAT and SAT are those which call for higher-level thinking skills.

Following are examples of two sentence completion items, one of which is at the Knowledge Level and one of which is at the Synthesis level.

"Not that I loved _____ less, but that I loved _____ more."

A. Portia....Calpurnia B. Cassius....Caesar
C. Caesar....Rome D. honor....Rome
E. Portia....honor

(Knowledge Level)

(Note the difference between a multiple choice item like this, and an essay question which asks for an identification of the quote and an explanation of its significance to the play Julius Caesar.)

Wilder presents death as _____ and not _____.

A. painful....bearable B. joyful...uninteresting
C. peaceful....unhappy D. tranquil....just
E. hostile...uneventful

(Synthesis Level)

The higher the cognitive level, the more important is the full articulation of the thinking processes which shaped the question and its answer. Awareness of the many different ways of looking at a question will not increase students' test-taking abilities, but it should make them more critical readers and writers.

D. For the Advanced Placement Class

Presuming a background of literary terms, students should be able to ask questions about poems. By having students write the questions in the AP test format, of one correct answer and four distractors, students are making critical distinctions about literary images, concepts, and meanings.

It will be necessary to point out to students that questions should be done on a level other than mere recall or comprehension. It is especially important that they try inference questions, and they should be reading critical information in the library to help them with this skill.

Distractors should be parallel to the correct answer, not outlandish.

Examples: The setting for "My Last Duchess" is
A. England B. Spain C. Luxembourg
D. France E. Italy

The man addressed by the duke was
A. much older than the duke
B. somewhat older than the duke
C. much younger than the duke
D. somewhat younger than the duke
E. of an indeterminable age

These questions can be used effectively if you transfer them to transparencies or dittoes. Discuss the clues and thought processes which lead to the selection of the "right" answer. Flexiblity and openness to students' answers encourages them to think about the processes they have used, and to compare their observations with those of others.

After a particular unit of study, give students an unfamiliar poem, story or excerpt which is related to the unit in some way and which has no accompanying questions. Ask them to write questions on the work. This will give the teacher valuable insight into the level of students' individual understanding.

E. Trivial Pursuit: This is a good review for a final exam or the Advanced Placement exam.

Decide on six literary categories such as authors/titles, characters, plot details, literary terms, settings, quotations, etc. Have students write a certain number of questions on combinations of the above.

Have questions typed up on 3 x 5 cards with the answer on the back (maybe for extra credit?).

Color code each card according to category.

Color code six envelopes and put the questions into appropriate envelopes.

Make a code card for the categories.

F. What's the Question?

Leila Christenbury and Patricia Kelly, in Questioning: A Path to Critical Thinking (1983, National Council for Teachers of English) describe a method in which the teacher supplies a list of answers and the students write the questions.

For example: Teacher: The answer to the question is bat. Does anyone have any questions?
Student: What is the implement used in baseball to hit the ball?
Student: What is a nocturnal flying mammal?
Student: What do people sometimes do with their eyes when they flirt?

And so on. This is an excellent vocabulary awareness activity. But the answer could just as easily be "Huck Finn" or "Beowulf," or "dangling participle."

G. Twenty Questions

This classic game can be used to review characters, images, or events in literary works, as well as authors and individual titles. The game invites team or group participation.

Questions must be answered with a "yes" or a "no," and each group (team) gets ten. The teacher or student poses a problem, such as "I'm thinking of an author from our reading this term." Each group's score is ten minus the number of questions asked and any wrong guesses. This penalty encourages students to learn how to phrase questions which quickly get to necessary information.

G. Quizzes/Tests

Instead of giving the students the usual 5 - 10 point quiz on material, have the students make up a quiz (with answers). They can exchange tests with each other or orally answer the tests, giving a description of the thinking skills required.

They could submit the quizzes to the teacher, who uses them to make a bigger test.

Students can write essay questions for tests also, individually or in groups.

Literature

"There is then creative reading,
as well as creative writing."
Ralph Waldo Emerson

Literature teachers challenge students' thought processes in many ways. Using questions which involve all cognitive levels, and techniques which involve all modalities (visual, auditory and kinesthetic), teachers can appeal to both right and left-brained learning styles. Literature offers a creative focus for development of critical thinking skills.

Sandra Stotsky, in Integrating Reading, Writing and Thinking (1983, National Council of Teachers of English), argues that increased reading has at least as much effect as additional grammar instruction in improving students' writing. Literature provides sophisticated models of written English for young people whose language environment may only offer fragments or sentences which average five words in length.

Literature encourages thinking through its imaginative representations of people, places, situations, and truths. The 1981 National Assessment of Educational Progress Report #11-L-01, Reading, Thinking and Writing, found that, although students generally have improved in many specific reading skills, they displayed conspicuous deficiencies in comprehension. Not surprisingly, an analysis of Brevard County's PSAT verbal scores shows that errors increase in direct proportion to the cognitive level of the question.

This chapter includes classroom strategies and activities for enriching the study of literature, as well as study and testing materials for specific literary works. Additional materials will be found in the district's 1985 Secondary Language Arts Curriculum Guide.

Recommended methods include: 1) the use of written and oral questioning strategies which require high-level thinking skills and which value the process of discovery along with the comprehension of factual material; 2) the verbalization of thinking processes as they apply to literature and reading comprehension; 3) encouragement of learner autonomy through the use of groups and student-generated activities such as projects; and 4) increased use of paperbacks to supplement the literature in anthologies, to capitalize on teacher expertise, and especially, to foster independent reading habits among students.

A. Presenting Literary Materials

1. See the 1985 Secondary Language Arts Curriculum Guide for scanning exercises which will introduce each of the newly adopted literature textbooks to teachers and students.

2. When introducing a new literary work, relate or compare the new material to those works that have already been covered in class.

3. Ask questions to determine students' knowledge. If you are discussing One Day in the Life of Ivan Denisovich, ask what factual information they already have about labor camps, the USSR, Alexander Solzenitsyn, political imprisonment, the Stalin regime, etc.

4. In order to reach the higher levels of thought, students need to place themselves in a similar situation. (How do you feel when you are blamed or punished for something you didn't do? What happens to you when you tell the truth and it is used against you? What happens to man's feelings about his life when he is treated as less than a human being?)

5. Teachers' manuals generally offer material for this type of introduction. Only the teacher, however, can establish the vital link between literature, current world events, national and community concerns, and individual student perceptions.

6. Students frequently have difficulty with the language in poems such as "Thanatopsis," "The Raven," or in passages from Shakespeare. Try presenting them orally, using teen-aged vernacular. After discussion of language usage, read the passage in the original, with the same emphasis and expression.

B. Discussion and Questioning

1. See an explanation of cognitive levels and teacher questioning strategies in Chapter II of this guide.

2. Most textbook questions progress through all levels of thinking. Use these questions with awareness that synthesis and evaluation level questions require respect for thought processes, as opposed to emphasis upon one right answer.

3. Be aware of the important concept of wait time. When teachers increase their wait time a mere three to five seconds, the length of responses increases, unsolicited but appropriate responses increase, and failures to respond decrease. Insufficient wait time creates an atmosphere in which students feel they must quickly supply an answer - any answer. Silence, something that many teachers assume to be a sign of failure in discussion, can actually be a sign of a particularly healthy healthy discussion and can indicate a teacher's careful use of wait time while students are thinking. Far from

being an indication of ignorance or non-involvement, silence is an essential part of the thinking process.

4. Be flexible with your questions. Writing out everything you are going to ask in a semblance of order may be useful, but don't expect the discussion to follow your list precisely. Don't let your prepared questions become an obstacle to change or modification.

   Many cautious teachers confine all of their questions to the safe or purely factual areas ("Who wrote it?" "What is the setting?" What is the topic sentence in this paragraph?") While these kinds of questions have their places, so do the open or divergent questions that give students an opportunity to confront multiple answers or interpretations.

5. Reinforce the best student answers by using specific praise, giving feedback, dignifying incorrect responses, and amplifying student answers.

6. Project READ:S includes specific strategies for teaching reading skills within the content area, and at all cognitive levels. Contact the Reading Resource Specialist in your high school to receive help with question and test making, as well as other classroom methods related to teaching thinking skills.

C. Assigning Homework and Classwork

Generally, the bulk of homework assignments in literature include reading and writing. In order to incorporate critical thinking, give specific objectives for reading, and include motivational strategies, such as reading aloud portions of the material to stimulate interest and discussion.

1. Arouse their curiousity by telling them about a humorous event coming up in the reading. (In Huckleberry Finn, students respond to the scene where Huck dresses up as a girl and gets "found out.") You can also alert students to watch for particular examples of an author's style, key thematic passages, and cross references to past readings or contemporary events.

2. Tell the students that they need to come to class with questions prepared that involve analysis of the novel. (What is ironic about_____? What is the tone of ____? What inference can be made about___?)

3. When students first come into class, ask three or four questions on the material assigned for the day. The first question missed becomes question number one on a pop quiz.

(If no questions are missed, no quiz is given.) One advantage of this strategy is that students will start motivating each other to be prepared.

4. Have students make their own vocabulary lists. Impress upon them that these words will be used - by them - to construct their own analogies, sentence completions, etc.

5. Use study guides. Be sure to write questions on all levels of understanding.

6. Encourage right-brained learners to get involved by having them sketch or act out scenes.

7. List or classify traits or examples. (List all the bad things that happen to Huck and Jim when they are not on the river.)

8. To help students understand the literary theme of illusion and reality, ask them to take ten minutes and list happenings from their own experience in which appearances were deceiving of reality.

9. When doing groupwork, give each group a various topic. Put a time limit on it. Share with the rest of the class. Have students analyze how they answered a group question.

10. An alternative to the traditional written or oral book report is to have individual students come after school to discuss a book briefly with you. The student brings the book, so that you can thumb through it and ask questions about characters and events. This informal setting provides a chance to talk about literature with students and to communicate your own interest in reading for pleasure.

D. Labeling Thought Processes

1. Encourage students to examine their thought processes as they read assigned literature. How did they form an impression of a character? What words in a literary passage affected them by suggesting a mood, an attitude, or a condition? At what point did they discover a key to the plot's outcome? These and other observations can be recorded in an assigned reading journal. They are most effective, however, when shared orally, as students discover each other's differing perceptions of the same material.

2. For each student comment, the teacher should provide feedback which labels the thought process which the

student has used or the appeal to which the student has responded. Verbalization of inductive and deductive thinking, the process of conclusion-making, and the power of emotional reactions to literature will foster students' ability to interact with the material they are reading.

3. Following is an example of a classroom exchange in which thought processes are labeled. Students have been asked to work in groups for ten minutes, scanning Macbeth for all references to birds. They report, telling what feelings or ideas these images of birds connote.

Pat: I think the raven's croaking is a warning to Duncan.
Teacher: Yes, the fact that Lady Macbeth notices the raven helps you to make this inference.
Dan: But in the very next scene, Banquo talks about the martlets that live in Macbeth's castle. He says they're a lucky omen.
Teacher: So we don't have enough evidence yet to make a valid conclusion?
Jenise: In Act II, scenes ii and iii, the owl's scream gives another hint of death.
Angela: And in scene iv, an owl kills a falcon, just like Macbeth killed the king.
Janet: Doesn't an owl indicate wisdom?
Teacher: Yes, we can classify several different connotations for the image of the owl.

4. Contrast the previous example with one in which the teacher reinforces only evidence which supports one conclusion, or with a lecture in which the teacher tells students what the bird images in Macbeth mean.

5. Excerpts from Sherlock Holmes stories can be used as examples of deductive thinking. (The textbook for English Skills I, Harcourt Journeys' Cascade, includes "The Dying Detective.") Holmes' habits of observation and analysis make helpful models for labeling thought processes.

E. Group Activities

1. The use of paperback novels provides the teacher with the flexibility to appeal to a wide range of student interests. Instead of assigning one novel to the entire class, five novels may be assigned, one to each of five groups. Novels are read outside of class, and class time is designated for planning a group presentation of the novel. The teacher may specifically assign study questions to be answered, questions to be written by the group, or other requirements - all of which will be shared with the

class on final presentation day. Students thus get exposure to several novels, even though they read only one.

2. Groups may be given the same short story or different stories and asked to translate one key scene into a film-script. The teacher will give prior instruction in writing directions for setting, costumes, and props; camera angles, close-ups, and fade-outs; and dialogue.

   This works best when only one scene, preferably an action scene, and one with dialogue, is selected. If all groups use the same story, they will be astonished when they hear the various interpretations done by other groups, and discover the importance of a prop, setting detail, or camera angle.

   A useful variation of this is to choose a story for which the district owns a filmed version. Then students can compare their interpretations of the story with both the written text and the professionally filmed version. Some of the many stories which might be used in this way are: Hawthorne's "Dr. Heidegger's Experiment," and "Rappaccini's Daughter"; Stockton's "Lady or the Tiger?"; Maupassant's "The Necklace"; Bradbury's "The Flying Machine"; Poe's "The Gold Bug"; Hemingway's "My Old Man"; Vonnegut's "Deer in the Works"; Fitzgerald's "Bernice Bobs Her Hair"; Faulkner's "Barn Burning" and "The Bear"; and Lawrence's "Rocking Horse Winner."

3. Groups provide an ideal method for teachers to assign the writing of student-generated questions based on the literature they are reading. See Chapter II of this guide for instruction in composing analogies and sentence-completion items which will give students practice with testing formats as well as encouraging them to use critical thinking skills.

4. Carol Booth Olson, University of California, Irvine Writing Project, writing in the November 1984 issue of Educational Leadership, presents a sequence of analysis-level activities which help students appreciate the relationship between setting and character. The activities are recommended as structured prewriting for an assignment on a specific literary work.

   a. Choose a popular TV show, like "Dynasty," and discuss with students the various elements that make up the setting of that show. List these elements on the chalkboard, using clustering to organize the details which are mentioned. Prod thinking with questions which explore setting in terms of the specific and the general. (What kinds of houses are shown? What rooms are used as settings for certain characters? What city and what

state are represented in the setting? Why does the story take place where it does? What does the setting tell about the characters?)

b. Direct students' attention to the settings for their own lives. Working in groups, ask them to fold a sheet of notebook paper into five columns. Give the following directions: "In column 1, list four items in or around your home, which have meaning for you. Then, in column 2, beside each item, tell what you think that item says about you to others." (For example, if a student lists her collection of African violets in column 1, she may write in column 2 that this shows her hobby and her love of flowers.)

c. Then, folding the paper so that column 1 covers column 2, Student #2 then writes in column 3 what he or she thinks the item in column 1 shows about the person who wrote it. (For instance, Student #2 might think a collection of African violets indicates a love of the exotic.) Continue trading papers with students #3 and #4 in the group, each time folding the paper so that only column 1 is visible and other students' responses are hidden.

d. By the time students complete the above, they have applied setting to their own lives and experienced responding to other people's settings. Ask them to create a character and a setting within one paragraph that "shows rather than tells." Give them a "telling" sentence, such as one of the following, and ask them to write a brief paragraph which "shows" the same information. They may want to use dialogue.

"telling sentences":

The way that she had furnished her room made it clear that she valued her heritage.

One glance at our street, and you know what kinds of people live there.

Share the paragraphs written from this assignment, using them to call attention to the many ways a writer can get across an idea or an impression, and to the connotative value of images, words and dialogue.

F. Teaching Poetry

When a contemporary poem is presented in class, teachers and students alike must apply critical thinking skills. Magazines like The New Yorker, Harper's, and Atlantic, as well as Scholastic's Literary Cavalcade, offer a constant variety of new

poetry, much of which is appropriate for classroom use. This is almost a necessary preparation for students in Advanced Placement English classes.

Once a poem is selected, the teacher may wish to prepare a series of lessons or activities like the following:

1. Pretest or Reading Guide for the poem - Use these or similar questions, tailored to the poem.

   Define any unfamiliar words in the poem, using a dictionary.

   Who is the speaker? What information does the poem give you about him or her?

   Give the antecedent for any pronouns.

   Describe the physical characteristics of the poem, such as the stanzaic divisions, line length, etc.

   What is the occasion? Where is the action taking place? What is the time?

   What scene(s) is(are) described in the poem?

   What is the attitude of the speaker toward.....?

   What is the literal definition of the word.....? What else does the poet intend for you to think of in connection with this word?

   What contrast (or comparison) is created in the poem? What effect does this have on the reader?

   What images are used in the poem? What symbols are used?

In general, these questions require responses on the cognitive levels of knowledge, comprehension, and application. Questions like the following will generate thinking on the levels of analysis, synthesis, and evaluation.

   What does the poem tell you about people in general?

   Is this idea a proper subject for a poem?

   What devices does the poet use to convey the idea of the poem?

   Relate the form, sound, or rhythm of the poem to its message.
   Do you think the poem is well written?

2. Oral Interpretation - Have students tape record their oral interpretations of the poem, using dramatic effort to make it more effective. They should defend their use of emphasis or other vocal expression by relating it to their interpretations of the poem.

3. Oral Responses, with Cognitive Labeling - Conduct an oral questioning session, using questions like those above. Tape record the discussion and play it back to students, labeling the various responses as Personal, Evaluative, Descriptive, or Interpretive. Show students how their their responses fall into various cognitive levels by giving them the following guide.

   Level 1: Restates incidents, distorts meaning of what is read; makes self-references; makes judgmental statements about characters or incidents.

   Level 2: Makes generalizations about characters or incidents; recalls details from reading; describes behavior and feelings of characters.

   Level 3: Makes comparisons; recognizes cause and effect relationships; explains behavior of characters; interprets feelings of characters; makes predictions about characters and situations; draws inferences; makes conclusions.

   Level 4: Makes hypotheses; isolates characteristics most admired in a work; demonstrates readiness to revise judgments in light of evidence; judges problems and issues in terms of situations, purposes, and consequences involved, rather than terms of fixed, dogmatic precepts or emotions.

4. Written Narration in Class - Students should write a first-person account of an incident (character, etc.) described in the poem. They should retell the story, using a different point of view from the poet's. The following questions will help students in their prewriting.
   What does the narrator observe from his(her) perspective? What does he(she) feel? What circumstances led up to the event which is described? What conversation does he/she have with other characters in the poem?

   Encourage students to use flashback, a chronological approach, or other method of narration that includes narration.

The value of this intensive method lies in the fact that it is used with a poem unfamiliar to both teacher and students. With no footnotes or teacher's manual provided for guidance, attention

turns to the thought processes of literary explication. Critical thinking is encouraged in such an atmosphere.

G. Written Assignments

Brevard's newly adopted textbooks provide many composition assignments at all cognitive levels and for various purposes. In addition, Chapter IV of this guide presents several approaches to classroom writing which complement the suggestions in this chapter.

H. Projects and Enrichment Activities

Projects call upon students to synthesize knowledge and to express it in another mode. Such an activity not only requires higher-level thinking skills, it appeals to the right-brained need to reshape experience. Thus, projects can provide vital motivation for students in a literature class.

The assignment of a project requires brainstorming by the class and sensitivity of the teacher to special student aptitudes and interests. Projects can take many forms; they can engage speaking, artistic, research, writing, musical, dramatic, and many other talents.

Ideally, projects are presented in a brief oral discussion which shares knowledge and also provides recognition for individual achievement. Very often, project presentations create a public focus for literature classes within a school. Invitations to school administrators or parents should result in improved awareness of academic achievement and a source of pride for the students involved.

Following are representative examples of individual or group projects suitable for secondary English classes.

1. Visual

   Posters - Illuminated manuscripts, heraldry, maps to show events of a novel, collages of a literary period, events in an author's life, etc.
   Shoebox - period interiors, artifacts, scenes from literature, etc.

   Stained glass - Medieval projects

   Original cartoons, artwork, including comic strip scenarios from literature

2. Tableaux: Students devise costume and setting to create a living version of a famous painting (which is then related to a literary period).

3. Audio-Visual

Videotaped performances (scenes from or oral interpretations of literature)

Literary news broadcasts from a historical period (including humorous or satirical interpretations)

Slide shows with music to interpret a given literary work

Original movies or filmstrips

4. Models

Architectural buildings or details

Musical instruments, weapons, armor, instruments of torture, scale models of settings for literature

5. Writing

Literary newspapers in the style of a historical period (Tatler, Spectator, Common Sense, etc.)

Original fiction or playscripts, perhaps written in imitation of a literary period

6. Music: Demonstrations of ballad, madrigal, antique instruments, American folk songs, etc.

7. Acting

Five-minute monologue or eight-minute duet from a given play (or adapted from a story or novel)

Presenation of original playscript written in the manner of a literary period (Medieval mystery play, Restoration comedy, American melodrama, etc.)

8. Offbeat Enrichment: reports on esoteric subjects of interest to student and pertinent to literary background

Medieval (or Greek, American frontier, etc.) customs in marriage, death, education, medicine, etc.

Black Plague or other disasters of historical background to literature (fire of London, American Civil War, etc.)

falconry, weaponry, history of the dictionary, history of comic strips, history of newspapers, etc.)

9. Group Projects: Many of the above ideas can be incorporated into groups, with different individuals performing different roles (ex. writing and acting a play).

   Meeting of the Minds - Many variations can be devised for this panel discussion which has students portraying selected authors or characters in a prepared format. The format usually centers around philosophy, life experiences, advice, regrets or explanations. To succeed, this project requires extensive research, but it makes an obvious appeal to creativity.

I. Bulletin Board Stimuli for Thinking

1. Use the bulletin board to display a running file of news articles, cartoons, or other current material which features literature or literary terms in any way. For instance, devote a board to figurative language, with separate sections for hyperbole, metaphor, onomatopoeia, personification, alliteration, and pun. Each day's cartoon page will supply examples; students will participate in the effort to "fill the board." Another example of this idea would be to capitalize on a literary event, like the 1985 100th anniversary of Huckleberry Finn (or Shakespeare's birthday, or the death of a famous writer).

2. Book jackets make an attractive collage for your bulletin board, especially when coupled with student-written reactions to specific works.

3. Keep a large map on your classroom wall. One should never assume (even in American Lit) that students know the setting for any literary work, much less the geographical characteristics which may have bearing on the work.

I. Testing

Incorporating critical thinking skills into literature study can be accomplished by revising test items to require higher level thinking skills. Any questioning format can be used to reflect multiple cognitive levels. For example, following are two questions from a test on One Day in the Life of Ivan Denisovich. Although they both concern one character's reaction to a place in the setting, the first item asks for recall of specific knowledge, while the second requires an interpretation of character based upon evidence.

When Shukhov goes to the dispensary, he is most favorably impressed by

1) the fact that the walking cases are put to work around the yard of the hospital.
2) the medic's writing poetry instead of working on hospital business.
3) the cleanliness, the quiet and whiteness of the hospital.
4) the neat flower beds around the hospital block.
5) the messiness and disorder which prevail.

(Knowledge Level)

What does Shukhov's reaction to the cleanliness and whiteness of the dispensary imply about his character?

1) He is resentful toward hospital workers.
2) He has a sense of dignity and correctness.
3) He is ignorant and unsophisticated.
4) He is unobservant.
5) He has no sense of personal worth.

(Evaluation Level)

Following are two similar items, written for The Scarlet Letter:

Governor Bellingham's sister was a(n) _____?

1) seamstress
2) witch
3) teacher
4) pianist
5) informer

(Comprehension Level)

Presenting Governor Bellingham's sister as a witch and the town's minister as an adulterer, shows Hawthorne's use of

1) dramatic tension.
2) hyperbole
3) irony
4) allusion
5) foreshadowing

(Evaluation Level)

All question items were written in the five-answer format used on the PSAT and SAT, tests which many college-bound students will take. For further help in writing test items at various cognitive levels, see Chapter II of this guide.

"We do not write in order to be understood.
We write in order to understand."
C. Day Lewis

Writing

In Chapter II of this guide, we urged teachers to get students to initiate their own questions, both as a means to gaining test-wiseness and as encouragement for autonomous learning. Nowhere is the path toward autonomy more apparent than in the process of writing.

When students attain that level of proficiency where their products are free of gross mechanical errors, they quickly become complacent and stop developing writing skills. Sometimes this happens in the sixth grade, especially if the student avoids complex sentences and multi-syllabic words.

While it is a fairly simple matter to find and mark errors on a student's paper, it is often difficult to prescribe treatment for incomplete or flat content. Many successful writing teachers have found the systematic use of prewriting strategies and the establishment of student writing groups essential to the development of thoughtful writers.

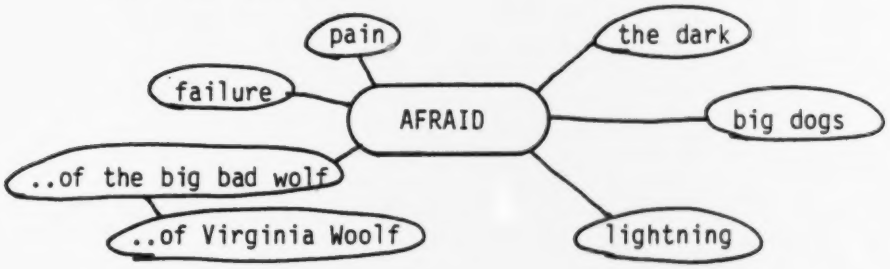
A. Prewriting Strategies

1. Clustering

Gabriele Rico describes clustering in Writing the Natural Way (1983, Tarcher Press, distributed by Houghton Mifflin). An outgrowth of her research in hemisphericity, clustering is a nonlinear process which bypasses the logical, orderly left brain and taps the "mental life of daydream, random thought, remembered incident, image or sensation."

Young writers especially, have problems overcoming the blank sheet of paper. Given a writing assignment, they simply cannot think of how to begin. They should write the topic in the middle of a fresh page, circle it, and begin to free-associate words, images, phrases, and associations which are called to mind by the topic. These are written randomly (clustered) around the central topic, for literally only a minute or two.

Below is a cluster done for Dr. Rico's first assignment, the word "afraid."

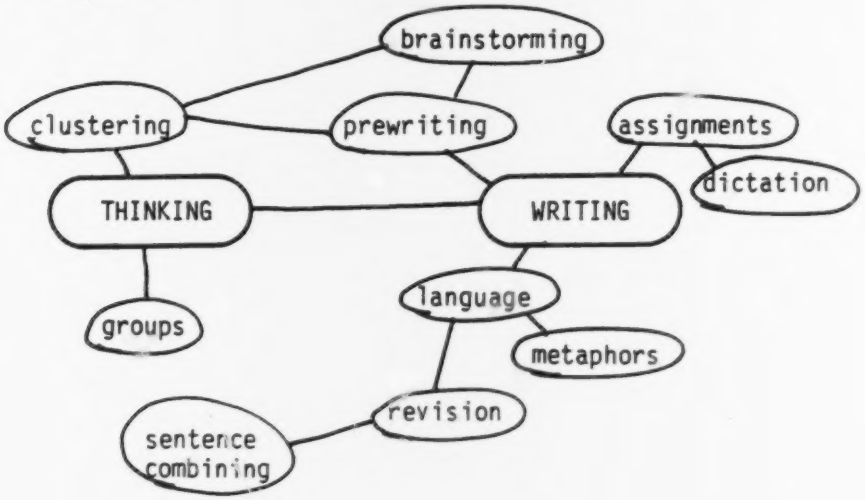


This procedure can also be done as a whole-class activity, with students supplying connections orally. With a full web of clusters on the chalkboard or overhead, the teacher can demonstrate how to classify similar responses, linking clusters with lines, arrows, etc., to form possible paragraphs or chapters. This is also an exellent time to label thought processes (such as classifying, analogous thinking or analysis) and to encourage playfulness with puns and other figurative language.

Because this is a natural process, no attempt should be made to judge or select the associations. Clustering should be done quickly, with no analysis. Frequently, the writer will know when to stop, after a certain word or image triggers what Rico calls the "aha response."

In addition to engaging a right brain response, clustering is versatile enough to adapt to many writing assignments, from ten-minute journal entries to book-length manuscripts.

For instance, below is the cluster which the author did for this chapter:



Clustering has even been used to test understanding of a literary work. Consider a cluster which uses TESS or HUCK as the focus word. Students could group themes, events, associations, images and personal reactions to the novel as they related to the central character.

Rico makes two important points about clustering: By blocking the "critical censorship of the Sign mind, it undercuts tension, anxiety, and resistance. . . .If we are receptive, ideas come of their own accord."

"Finally," she says, "clustering is a self-organizing process." When a pattern emerges, the good feeling that results fuels the writing that will follow.

Considering that motivation and organization are two major problems in developing writers, clustering deserves serious attention by teachers.

2. Freewriting

Freewriting is a technique similar to clustering in that it attempts to remove many of the left-brain obstacles to motivation. Students are asked to write freely for fifteen minutes, with no assigned subject, no "rules" or attention to the mechanics of writing, but instead attention to any idea, image, or sensation that occurs to them. Encourage them to flout the traditional inhibitors of spelling and punctuation. Now is their chance to interrupt a thought with an image, juxtapose the serious with the silly, and use words they do not know how to spell. They must not stop writing for any purpose, and may repeat a nonsense word if that is literally the only thing on their mind at the moment.

After fifteen minutes, ask them to read what they have written and circle any words or ideas they might like to expand into a personal essay. Usually, they are surprised at the nuggets of good writing they have produced, the style and tone which often surfaces in such an assignment.

At this point, a ten-minute response session in writing groups might help each writer identify elements worth saving and developing. The group might also recommend a form for the ideas or mood of the freewriting - a poem for example, or a persuasive essay. This freewriting assignment works well with the "thought link" activity described in F.5. of this chapter.

3. Prewriting for Persuasive Compositions

Ask students to jot arguments for both sides of the issue they are propounding. Only a fair consideration of "the

other side" will assure the writer's attention to key objections by the reader. This prewriting is done effectively in a group, where others can react to major assumptions in the argument. Major assumptions in the writer's argument should also be identified, and the response group must look for logical fallacies.

4. Personal Relevancy

Brainstorming exercises which cause students to think about the assignment in a personal way will lay groundwork for a better composition. Page 48 of this guide offers such an activity as prewriting for an assignment on setting.

B. Writing Groups

1. Groups of four or five students are formed on the first day of class - randomly, by seating. These groups function as units throughout the year, reading and responding to each other's writings. Students within a group reinforce each other in providing the sort of feedback that helps a writer revise with insight. Properly functioning, these groups take much pressure away from the teacher, since major writing problems are resolved within the group.

The concept depends upon two assumptions: 1) Everyone likes to have someone read his recently-written paper; and 2) Once a student receives a response that gives valid insight into his own work, he will return that help by becoming a more critical reader of his peers' work. The process is incremental, as the student eventually becomes a critical responder to his own work, and thus achieves autonomy.

Training the group in effective responding is the teacher's responsibility. Students are all too willing to settle for glib compliments and politely inane comments. The teacher can mitigate this tendency by providing specific response sheets tailored to each writing task.

This task team is indebted to Missy Kozacik and Marie Rogers, two extraordinary teachers from Independence High School, Charlotte-Mecklenberg School District. In a two-day consultancy in Brevard, they shared a wealth of ideas, inspiration, and resources. Many of the critique papers included below are copies or adaptations of materials which they developed.

This checklist for a descriptive paragraph includes enough specific questions to guide a novice response group.

There is at least one figure of speech.	___	___
By reading this, I can visualize what someone (something or someplace) looks like.	___	___
There is at least one sensory impression.	___	___
This paragraph <u>shows</u> instead of <u>tells</u>.	___	___
There are no cliches in this paragraph.	___	___
There is a dominant impression.	___	___

The responses are "Yes" or "No," with totals listed at the bottom, along with the evaluator's name and date and one last question: "Which word is the most effective in this paragraph and why?"

The requirements on this checklist are given to students at the same time as the assignment. Because the list is specific to one assignment, it can be adapted to meet the teacher's goals for any class. A 10 - 15 minute group session would suffice for this level of response, emphasizing the question at the end of the checklist which forces the reader to find one positive reaction.

The next set of questions are from a critique sheet for a longer assignment, a comparison/ contrast essay. Again, the format is a checklist, with Yes-No responses and space for a comment at the end. Note the emphasis on process, which includes brainstorming activities as an essential part of the essay.

Introduction gets the reader's interest.
The thesis statement indicates the type of paper this will be (i.e., comparison/contrast).
Both likenesses and differences are referred to in the thesis statement.
The words "similarities" and "differences" are <u>not</u> used in the thesis statement.
The topic is not too broad or too narrow.
The method of organization is apparent (either block or flip-flop).
The paper is an ordered plan (not just a jumble of random similarities and differences).
The subject is selected from the writer's personal experiences.
Specific details are included which relate to the central idea.
Appropriate transitions are incorporated within the paper.
Both similarities and differences are fairly examined on the same basis, with neither favored.
Brainstorming list, 20 Comparison/Contrast Potential Topics, Mapping and separate introductions are included.

There are few, if any, mechanical problems.
If there are, circle the type of error:

pronoun agreement spelling verb consistency

run-on fragment usage of you

comma splice punctuation capitalization

A more affective response is required in the next guide list:

Your title suggests....
When I read the first few sentences, I thought....
The problem or issue you deal with is...
You seem to treat the opposing position...
You show yourself to be reasonable when...
The best support for your position seems to be...
Your argument might be more persuasive if...
The overall effect is...
I think your reader might...
All things considered....

This response required the writing of specific responses in place of the "either-or" emphasis of other checklists.

Using many forms of critique lists will prod your students to expand their thinking about what is needed in a piece of writing. By varying the specifics, the teacher provides constant guidance as to what is expected in a task (both writing and responding). Students should also be required to write a list of questions for certain assignments. The goal, also fostered by varying the response questions, is to enable students to initiate the questions themselves. If they can examine a peer's work with insight, they can evaluate their own work as well.

2. Group Writing Assignments

The group structure permits joint writing assignments, which give practical experience in a career-related skill. A problem is given, students brainstorm possibilities, make notes, organize a plan, and then write and revise a product. The cooperation, thinking, and creativity required make this a valuable activity.

a. Ask all students to write a five-sentence summary of the novel they have read (or movie they have seen in class). Then, in small groups, they should consolidate their four or five summaries into one version that best retains the essence of the original, in as few words as possible.

b. For a springtime writing assignment, ask students to work in groups developing a summer activity camp for teen-agers. Specific requirements include:

1. a theme and a name for the camp (example: a breakdance camp called Camp Break-a-way);
2. an advertising brochure with descriptions of special features and scheduled activities;
3. a letter to parents promoting the camp and its benefits for young people.

An extension of this would be the production of a 30-second tape recorded commercial. This activity appeals to all learning modalities in its synthesis of writing and planning abilities.

c. Writers in a group can collaborate in translating a scene from literature into a moviescript. See a complete description of this activity on page 47 of this guide.

3. One final word about writing groups: Students who regularly write together and share revision problems also develop a sense of healthy competition. Each one wants to write the best image, the cleverest ending, the most stunning introduction, the most interesting paper in the group. In such an atmosphere, excellence nourishes itself.

C. Group Revision Strategies

Most of the following group revision tasks are reprinted from a list developed by Shelley Spears for the University of North Carolina Writing Project in 1980. Introduce the tasks individually, with examples and classroom discussion, and link them to appropriate assignments. Some of the tasks, like adding a sensory detail, are routine. Others, like replacing labeling words with specific details, require careful preparation.

1. Write a new title (or two new titles) for the composition. Choose the most effective one. (Consider also the original title.)

2. Rewrite the beginning in two different ways. Choose the most effective.

3. Add a detail that appeals to the sense of touch (or one of the other senses).

4. Delete at least one unnecessary detail.

5. Substitute stronger verbs for the verb "to be" in the composition. Change any other verbs that are not effective, using a thesaurus as necessary.

6. Find the adjectives in the composition. Are they necessary, or would a stronger noun or sensory detail do a better job of describing?

7. Let each member of the group rewrite a sentence that the group finds ineffective. Discuss the suggestions. Choose the version that the group feels is most effective (and the author agrees).

8. Find sentences that start with the same word or words (i.e. The, There, It, He, She). Make suggestions for rewriting these without changing the meaning. Decide which ones you want to use in the revised composition.

9. Count the words in each sentence and make a bar graph. Do you need to revise some sentences to avoid monotony?

10. Part I: Find sentences that you think should be combined. Write two or three new versions. Choose the most effective form. Take care not to alter the meaning.
Part II: Find sentences that should be broken down into shorter sentences and rewrite them.

11. Find sentences that tell rather than show. Rewrite these. Add sentences for detail, if necessary.

12. Take out the labeling words in the composition and replace these with specific details. (This must be preceded by a discussion of labeling words.)

13. Rewrite the ending in two different ways. Choose the most effective one for the author's purpose.

14. Rewrite the composition for a different audience.

15. Choose one composition from the group and rewrite it as a poem.

In addition, students may be interested in finding a readability level for their writing. Show them how to do a Fry Graph by counting syllables in a 100 word passage and then comparing that figure with the number of sentences. The Fry Graph is available from the Reading Resource specialist in senior highs.

D. Sentence Combining

a. Sentence combining is a hard-earned skill. In their zeal for avoiding run-on sentences and comma splices, students sometimes abandon the complex sentence altogether, thus losing the subtleties of subordination. (They pay the price when they take college-related tests which require sophisticated knowledge of sentence structure.)

There are many commercial sentence-combining activities available, and many require little thought or creativity. Try involving literature and critical thinking in your own sentence combining exercises. The following sample was developed to give students insight into the styles of three very different American authors.

1. Make one sentence in Ben Franklin's style.

   I ruled each page.
   I used red ink.
   I made seven columns.
   I made a column for each day of the week.
   I marked each column with a letter.
   The letter stood for the day of the week.

2. Make one sentence in Hawthorne's style.

   They sat a considerable time.
   They were speechless.
   They were confused.
   They were shrinking from Mr. Hooper's eyes.
   They felt Mr. Hooper's eye to be fixed on them.
   They felt Mr. Hooper had an invisible glance.

3. Make one sentence in Hemingway's style.

   I knew.
   I would never have done such things.
   I was afraid to die.
   I was very much afraid.
   I lay in bed.
   I lay in bed at night.
   I lay in bed by myself.
   I lay in bed often.
   I lay in bed afraid to die.
   I lay wondering.
   I wondered how I would be later.
   I would go back to the front again.

There will be many excellent ways to combine each of these packages. Display several student examples on the chalkboard or overhead before showing the original writing by Franklin, Hawthorne, and Hemingway. Once a teacher builds a file of these exercises, they can be offered on a regular basis, for practice during roll taking.

E. Journals

A journal almost by definition is a record of thought. Because it is informal, it combines the best features of prewriting, accurate recording, and experimenting with language. Whether or not the teacher reads or grades students' journals, the assignment can lead to positive results in writing habits and

attitudes. Assignments or suggestions by the teacher help to structure journal entries along productive lines. Following are ideas for using the journal as an idea or image bank, and as a tool for critical thinking.

1. To encourage daily journal writing, allot the time during roll call or first five or ten minutes of class. Keep strict account of time, so that students never perceive journal writing as a "time filler." Although they will beg for more time if they are onto something good, remind them that classroom journals are intended for practice, and they may want to start a more reflective journal at home. Suggested assignments might include:

   write one topic which interests you (for a future paper)
   look around the classroom and notice something you never noticed before
   write about the way the rain sounds today (if it's raining)
   describe a stranger whom you have seen recently
   write your reaction to the reading you did last night
   write three questions with no answers
   find an earlier journal entry and write a reaction to it
   write several metaphors for Spring Break (or the prom, your foot, etc.)

2. Freewriting in a journal can be a valuable way of "limbering up" before a writing class.

3. Clustering provides a ready-made daily assignment, for students can use any word. You can supply it or choose a different student every day to give the word. Words for emotions (frustration, anticipation, etc.), or colors (pink, emerald, etc.) or verbs (cling, gyrate, etc.) all trigger associations which will give students several minutes of individual expression. The beauty of clustering is the range of responses which it elicits in a very short period of time.

4. A journal can become a bank of descriptions, arguments, or figurative language, with seeds of thought available for further development in poems, essays or fiction. Encourage students to read back through early entries as a source of ideas and also for a sense of their development as writers.

5. Use the journal to prepare for an assignment you are planning to make. For instance, before assigning a paper on risk taking by characters in Tale of Two Cities, a teacher might give this series of suggestions for journal writing:
   cluster, using the word "risk"
   write about a time when you risked something
   decide whether risk-taking is necessary for success
   finish the statement "People who take risks..."

F. Metaphors as Thought Links

Metaphors encourage students to associate familiar objects, places, people, or concepts with new ideas. Practice in metaphor-making leads to improvement in writing style. It is a useful way to gain insights and heighten perceptions by encouraging new thought habits.

1. As students discover metaphors in literature , or hear cliched metaphors, ask them to substitute their own. (Example: "mad as a wet hen" changed to "mad as a wet cat", or "mad as a....")

2. Acquaint students with the "metaphor game," whereby quick comparisons are made for persons, places, or objects. The teacher can even establish categories. For instance, using "vegetable" as a category, students can refer to a classmate as a "radish," a "tomato," or a "squash." (Using shoe terms, they can say someone is a Nike tennis shoe or a pair of Army boots.) They can also use such terms to name cars, schools, classes, etc. - whatever appeals to them. A metaphor response gives effective information to a writer also. "Your paper reminded me of a waltz," effectively communicates a perception of tone. Students should learn how to develop extended metaphors through this game. Instead of writing "He is a bugle," students would write, "He burst into class, announcing victory in notes clear and sweet."

3. Poetry offers an obvious source of creative comparisons. Reading aloud "a metaphor a day" from poetry or fiction will stimulate students to make fresh associations between familiar ideas (and foster an appreciation of literature as well).

4. Award a "Metaphor of the Week" for the best original image from student writing. Start a bulletin board or classroom poster of students' metaphors.

5. Force association between the familiar and the unfamiliar by asking students to make a list of five subjects with which they are familiar (for example, "surfing," "rock music," "pizza," "cars," and "punk"). Then give them a list of five broad subjects such as "Emerson," "freedom," "poetry," "violence," "the epic hero," etc. Students then link each of their five subjects with one of yours - and write a topic sentence which logically connects the two. For best results, the teacher would do one example on the chalkboard. For instance, "surfing," might be combined with "freedom" in "Surfers understand the fullest meaning of the word freedom." An activity like this helps a young writer to develop an expressive voice.

G. Dictation

This venerable classroom method adds the dimension of listening to a writing lesson, and it forces thinking about punctuation and

format. Finally, it insinuates literary models of language into the students' experience.

1. The teacher chooses a paragraph or a poem of an appropriate length, and from a work not in the class text. Read it slowly, so that students have time to copy it. After a brief period for them to look over their writing, put the original on the overhead, and let them compare.

2. Choose readings carefully. They can complement the literature studied in class, they can enrich, and they can stimulate students to outside reading. For instance, this passage from Prisons, by Mary Lee Settle, would make an excellent accompaniment to the Puritan - Cavalier period of British Literature.

> "I saw him then, mighty Cromwell, setting his horse high above me, followed by only a few officers. He had dirty linen, and his hands and face were streaked with mud from hard riding. He was smiling down on Gideon. It was a sweet smile that belied the stern lines of his face. His eyes looked as a man's who falls into secret melancholies, apologetic, sodden eyes, with much need in them. I would have said a drunkard from them and from his swollen face, but it is not so - not for so common a lover as strong drink."

Discussion of this dictation could involve not only commas, spellings, complex sentence patterns, variety in sentence length, but also words like "belied," "Gideon," and "linen," that contribute to the effect of this passage. A brief discussion of the context for this description (a twenty-year old soldier who becomes disillusioned with Cromwell and war) might interest students in reading the book independently.

3. Choose a dictation with dialogue if you wish to teach the use of quotation marks, as well as characterization developed through dialogue. Choose a piece that includes a particular vocabulary word which you wish to model. Use a short poem to illustrate the effects of line division, word placement and punctuation upon rhythm and meaning.

H. Research

1. Often students have little understanding of what constitutes a source of information (beyond the encyclopedia, that is). List various topics and ask students to work in groups, identifying possible sources of information about topics such as: history of American film; the cost of raising a child in America; etiquette in Victorian England; influences on Shakespeare's writing; the Elgin Marbles as literary inspiration; careers in computers; missing children in America, etc. Ask the groups

to summarize the thinking processes which they followed. In other words, why do they name the sources that they name?

2. Assign an annotated biblography to give students a feel for the research process. Ask them to locate four or five sources for a particular topic, list them in proper bibliographic form, and then write a paragraph telling what kinds of information on (as opposed to what information about) the topic are provided in each source. Emphasize that the paragraphs must be brief, that they must analyze the value of the source and not merely repeat information about the topic.

I. Writing Essay Questions

Encourage students to examine the processes by which they attack an essay question. Give them an example like the following:

> Compare and contrast the literary accomplishments of the Age of Pericles with those of the Medieval Period. In what ways did literature grow out of the culture of the time? Consider literary forms, authors, specific works and themes.

Ask students how they would go about answering that question on a final exam. As they respond, label the organizational style they are using. For instance:

> Alice: I would start by listing the Greek literary forms, authors, works and themes; and opposite that I'd put the Medieval forms, authors, works and themes.
>
> Teacher: You mean you'd categorize the information?
>
> Alice: Yes, to make sure I included examples in all four categories.
>
> Teacher: That would be a useful way to recall information.
>
> Bill: But the question also asks how literature grew out of the culture of the time.
>
> Teacher: What thinking skill does that require?
>
> Bill: Analysis, I guess. I'd want to list a few cultural factors for each period, and decide how they influenced the writers.
>
> Cathy: How about the "compare and contrast" part of the question? Listing won't be enough to answer that.
>
> Teacher: Yes, that's a separate thought process. How would you go about planning for it?

Cathy: I would make two columns, one for similarities and one for differences.

Bill: You could put an "s" or a "d" beside the literary forms and themes you had listed in categories.

Teacher: So in order to completely answer the question, you would need to recall information, classify and analyze it, as well as organize it in paragraph form?

The opportunity to interpret a difficult question, and examine the conceptual processes necessary to answer it will help the student as much as any review of content. Continual practice at verbalizing thought processes gives students confidence in their ability to think.

Logic

Thought makes the whole dignity of man; therefore endeavor to think well, that is the only morality.

...Blaise Pascal

Most classroom activities, such as spelling, reading, math calculations, and grammar, involve primarily the left hemisphere of the brain. Practice in thinking skills which require patterning, making generalizations and inferences, drawing analogies, and speculating involve the right hemisphere of the brain. By including activities which appeal to both sides of the brain, teachers encourage students' ability to transfer learning, both within the same subject area, and also to other subjects and to everyday situations.

In addition, through experience with common fallacies in thinking and with syllogistic reasoning, students improve their awareness of truth value and their abilities at analytical thinking.

A. Patterning

Several thinking processes are required in patterning. Students first look at the overall series or sequence, then compare the first item with the second to determine what change was made in the progression. Finally, they determine what change was made between the second and third items. If the change was the same in both cases, the pattern is evident; if not, the procedure must be repeated.

ex. 2, 4, 8, 16, ___
First Change: 4 is twice 2.
Second Change: 8 is twice 4.
Since 16 is twice 8, we can assume the missing number is 32, or twice 16.
(Note if the student says the first change is "4 is two more than 2", the second change would be "8 is four more than 4" and he would have to repeat the procedure.)

In any activity which teaches thinking skills, the oral articulation and sharing of thought processes make the difference between a problem-solving exercise and a learning experience. Finding the correct solution without understanding the steps in thinking which are involved, is of little long-term use to the student.

Below are several patterning activities which may be offered informally, as brain teasers, on a regular basis throughout the school year.

1. Figure Patterns: Present a sequence of three or four figures on the overhead or chalkboard. Ask students to tell you what comes next. For example, if you draw a

triangle, a circle, a triangle, and a circle, they should deduce that a triangle comes next in the sequence. Other patterns are more sophisticated. Try a triangle followed by a square followed by a pentagon. Then vary the pattern by drawing a triangle, a square, a hexagon, and a heptagon (the next figure should be a nonagon). Another pattern uses quadrants to position an irregular shape facing three different ways, with the student supplying the fourth.

2. Number patterns: Use sequencing problems which feature relationships between numbers. A simple example would be 1, 2, 3, 4, __. Other examples might make use of subtraction, multiplication, etc. Variations could employ series of numbers, for example,

   1,2,3 12,22,32 123,223,323 _____

3. Midwest Publications, P.O. Box 448, Pacific Grove, California 93950, offers several books of Figure Patterns in their Inductive Thinking Skills series. Students are also adept at creating patterning problems.

B. Making Inferences

Class discussion of a reading passage will broaden students' awareness of the many interpretations possible for any given word, image, or thought. Again, de-emphasis of the "right answer" and focus on the thinking skills necessary to derive and support a reasonable answer, will generate more involvement by students and increase their ability to reason.

Because making inferences is a necessary skill in reading, many literature anthologies include specially identified questions at the end of a passage. In addition, many commercially prepared materials offer specific situations, like the following, which call for inference. Students, however, can supply appropriate examples from their own experience.

Monday morning, John's alarm clock went off at 6:30. He dressed quickly and ate breakfast. When he left for school, the clock in the kitchen said 7:00. After he had walked the five blocks to school, he saw by the hall clock that it was 9:15, and he was already two hours late for class.

Decide which inferences are reasonable (T), unreasonable (F), or debatable (D).

1. John's alarm clock is not reliable.
2. John cannot tell time.
3. John took two hours to walk to school.
4. A power failure cut the electricity off for two hours in John's neighborhood that night.
5. John doesn't like school.
6. John wasted too much time getting dressed.

7. The clocks in John's kitchen and bedroom are both electric.
8. John had a big test that day in his first period class.
9. John shut off the alarm and went back to sleep for two hours.
10. John lives 17 miles from his school.

Oral discussion will bring out students' reasons for making an inference, while writing or listening to a lecture will seldom expose the variety of thinking which is possible. It is this exposure to divergent thinking which helps students develop their own habits.

C. Drawing Analogies

An analogy is a complex set of similarities between two things, situations, or relationships which are basically different. Reasoning by analogy involves the ability to make inferences.

Students reason by analogy when they attempt to convince, to explain, or simply to understand new material. The success of an analogy often rests in its familiarity.

Since faulty analogies are a source of erroneous thinking, students should be encouraged to evaluate analogies as to appropriateness in a given situation. An analogy makes statements about one thing and hopes the reader will infer that these statements apply to the other as well. Most analogies contain faults. To determine whether the fault is an obstacle to clear thinking, students should consider: 1) Are the statements about the first thing true? 2) Are the circumstances under which they hold, or the reasons they hold, applicable to the second thing? (See Section F on Fallacies in Logic.)

Students should be encouraged to watch for analogies in political rhetoric, as well as in literature and in their daily experiences. The ability to reason through word analogies is a valuable test-taking skill. Following are several forms of analogies which can be applied in various classrom activities:

1. Calling upon personal experience: "I have always liked books about animals, so I know I'll enjoy White Fang."

2. Calling on others' experience: "My father is a policeman and he gets evaluated partly on his ability to write accurate reports, so I think writing is an important skill."

3. Using old sayings to justify conclusions: "This movie had a big advertising build-up, but it sure was boring. You can't judge a book by its cover."

4. Using a similar situation to predict an outcome: "Censorship of literature tends to increase interest in banned books and authors. If we ban Shakespeare, students will develop an interest in him."

5. Making predictions based on a pattern: "First we had cordless radios; now we have cordless telephones. Soon all electrical devices will be cordless."

6. Comparing two obviously dissimilar things which have only surface similarities: "Reason uses the senses for help as the blind man uses his cane." (quote from Leibniz)

7. Comparing two things which seem to be similar, but are in fact quite different: "The camellia and the oleander are both beautiful blossoms, but the camellia is safe to eat, and the oleander is poisonous."

8. Word analogies are usually written as mathematical formulas (A : B :: C : D). They are used to test vocabuary, knowledge, reasoning ability, and the ability to grasp many kinds of relationships. Subtle word analogies are capable of many inferences; thus it is essential that students gain experience by writing analogies and verbalizing the thinking steps involved. See pages 5, 38, and 86 of this guide for specific help in teaching word analogies.

D. Speculating

"What if?" questions promote originality and common sense instead of mere recall of information. In addition, they can accommodate many different answers, and they often involve situations from everyday life. Sharing of answers to such questions helps students understand divergent thinking proceses and to broaden their own ranges of thinking.

E. Cause and Effect

Cause and effect relationships depend upon generalizations, as well as sequence. Just because I sneeze after hearing thunder, does not mean the thunder caused the sneeze. Students need to learn to examine negative examples (How often do people sneeze in the absence of thunder?) and to avoid mistaking an effect for a cause (Most auto accidents occur within eight miles of the person's home. Therefore, to avoid auto accidents, people should move).

Instruction in cause-and-effect might include the following:

1. Discuss the different understandings of the word "cause." For instance, going out in the rain may cause a cold, but is it a necessary factor for catching cold? Again, knowing how to read well may be a necessary factor for success in college, but is it the only cause for success? What about

remote causes of an event? (I was so upset over my poor report card that I walked right in front of the car.)

2. Consider understandings of the word "effect," including side effects. What happens when we assume that a cause has only one important effect?

3. Use cause-and-effect relationships from literature and history and look for examples in current events.

4. Look for examples of faulty cause-and-effect reasoning. Advertising and comic strips provide a rich source of such examples. Students will also find examples in their everyday conversations.

F. Syllogisms

A syllogism is a form of argument with two premises or statements and a conclusion. If both premises or statements are accepted, then the conclusion should also be true. The famous example is:

Major premise: All men are mortal.
Minor premise: Socrates is a man.
Conclusion: Therefore, Socrates is mortal.

Since this form of reasoning is so common, we are often convinced by form alone, without proper regard for substance. Campaign rhetoric abounds in faulty syllogisms. For instance:

Major premise: This country needs a young president.
Minor premise: I am a young candidate.
Conclusion: Therefore, I should be president.
Although both premises may be true, the conclusion does not follow logically.

People do not speak in terms of premises and conclusions; yet their statements reflect the influence of syllogistic thinking. For instance, if Joe comments on a cloudy day, "I think it's going to rain soon," he is assuming two premises: 1) A cloudy day indicates rain and 2) Today it is cloudy. Thus, his conclusion is valid, even though his premises are unstated.

Since the major premise is usually a broad generalization, it is easy to assume it to be true in all particulars, and overlook exceptions. Many faulty conclusions are based on partial truths or hidden assumptions.

Example: Major premise - Rich people spend money freely.
Minor premise - Paul is rich.
Conclusion - Paul spends money freely.
In fact, many rich people are extremely careful about their expenditures, and Paul may not spend money freely.

Two correct premises do not necessarily lead to a true conclusion. For instance, the statements "All dogs have four feet" and "My cat has four feet" do not lead to the conclusion "Therefore, my cat is a dog."

Commercially prepared syllogisms are published by Midwest Publications, P.O. Box 448, Pacific Grove, California 93950. They are best used in class discussion, so that students have the benefits of reasoning with and against each other while improving listening skills.

To encourage thinking about unstated assumptions, ask students to reconstruct the syllogisms behind casual remarks, such as "I bet we have a pop quiz today" or "I can tell this will be a hard class."

G. Fallacies in Logic

A fallacy is an error in reasoning. The study of logical fallacies will sharpen students' critical thinking skills as well as help them to recognize the techniques of false arguments.

Because fallacies make a strong psychological and emotional appeal, they effectively hide faulty reasoning. They also use reasoning which, in other contexts, is logical.

One excellent example of the use of logical fallacies is Max Schulman's amusing short story, "Love is a Fallacy." Students become adept at locating their own examples in advertising, political rhetoric and, eventually, in their teacher's own arguments.

Following are several representative fallacies, to be used as a basis for classroom discussion.

1. TESTIMONIAL : Well-known people or people with authoritative titles endorse products or opinions. Those who admire the famous person or automatically respect a title like "Doctor" or "Reverend" will thus buy the product or adopt the opinion.

   ex. Visual testimonials - Geraldine Ferraro for Pepsi and Karl Malden for American Express

2. EITHER-OR : In this fallacy, only two choices are given. The assumption is that no other choices are available when in fact, other choices are usually possible.

   ex. "Will you give me your class notes, or do you want me to fail this course?"

3. FALSE ANALOGY: The assumption is that if two things or concepts are similar in one way, they must be similar in other ways.

ex. Huckleberry Finn and Catcher in the Rye both have teen-aged heroes. Both novels use the Mississippi River as a symbol of freedom.

4. BANDWAGON: This fallacy appeals to people's desire for conformity. The message is "Join the group, so you won't feel left out."

   ex. "Aw, Mrs. Williams, nobody else is giving a quiz on the day before Spring Break."

5. INNUENDO: A hint is made that has the effect of damaging someone's credibility.

   ex. "What 16-year-old knows anything about world affairs?"

6. RED HERRING: This fallacy presents distracting and/or unrelated facts which are intended to lead thoughts away from the main issue.

   ex. "I think Our High School should have the prom at DisneyWorld. Just because Rival High School has their prom in the gym, doesn't mean we have to."

7. STEREOTYPING: This fallacy uses a hasty generalization about an entire group of people.

   ex. "Athletes never make good grades."

8. PITY: The intent is to substitute pity for reason.

   ex. "My car broke down last night and I had to walk five miles home in the rain. By the time I got home, I was soaked and I had a fever, and then they told me my dog had been run over. (That's why I didn't do my homework.)"

9. LOADED WORDS: Words with strong emotional content are used to influence the argument. Either positive or negative words may be used.

   ex. "You wouldn't want your children to miss this cultural opportunity, would you?" (positive)

   "The dean's methods are worthy of the Gestapo." (negative)

10. COMMON FOLK: This fallacy avoids confronting the issue by appealing to an assumed brotherhood of the audience.

    ex. "Those of us who love America don't want to see this law passed."

11. SNOB APPEAL: This fallacy avoids reasoning by appealing to the assumed superiority of the audience.

    ex. "You certainly don't want your children to go through life without reading the classics."

12. AVOIDING THE QUESTION: This argument avoids the question by misinterpreting it or by asking another question.

    ex. (a) "Did you do your homework?"
    "I had a lot of trouble understanding the instructions."

    (b) "What movie do you want to see?"
    "Which one do you like the best?"

H. Brain Teasers

Brain teasers serve the purpose of challenging students' thinking skills. When shared as a class activity, they also expose divergent thought and encourage students to stretch their thinking habits.

Following are five sample word problems and a series of symbols for interpretation. These exercises were developed by Missy Kozacik and Marie Rogers, Independence High School, Charlotte, North Carolina. Many similar activities are available in commerical publications.

1. A scientist's brother died. But the boy who died did not have a brother. How is this possible?

2. Two mothers and two daughters divided a pizza among themselves. Each person received exactly one-third of the pizza. How is this possible?

3. How can you make "eight" with the three matches shown below by adding only two matches?

   Original Arrangement Solution:

4. You can arrange six pennies in two rows, as shown below. By moving just one coin, can you make two rows of four pennies each?

   Original Arrangement Solution:

5. Arrange a triangle with ten pennies, as shown below. Now turn the triangle upside down, but by moving only three coins.

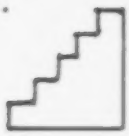
Original Arrangement

Solution:

6. For each of the symbols below, try to create pictures in your mind. What does each look like, and what does each remind you of?

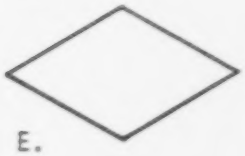
ex.

ferris wheel
sliced pizza
geometry diagram

A. 

B.

C.

D. 

E.

86

Vocabulary

A word is dead
When it is said,
Some say.
I say it just
Begins to live
That day.
Emily Dickinson

Thomas Edison said, "There is nothing a man will not do in order to avoid the labor of thinking." Because critical thinking requires a wide vocabulary, one might assume that a reason students avoid thinking is an inadequate vocabulary.

Words are the tools of accurate thought, and students must be able to use a variety of words for thinking, writing, and speaking. A limited vocabulary restricts both comprehension and expression, confining the use of students' creative powers. Because students need tools with which to understand and to express themselves, vocabulary must be an integral part of the teacher's commitment to teaching critical thinking skills.

This section presents major vocabulary skills and concepts, together with activities for the classroom teacher to use in teaching vocabulary. These activities show how higher level thinking skills can be developed through vocabulary study.

A significant factor in students' vocabulary improvement is the teacher's own involvement with and excitement about words. No technique, activity, or drill program can replace the teacher's systematic role modeling of an enriched vocabulary. Using words in routine communication gives them a legitimacy no vocabulary list, with its memorized definitions, can approach. Unless students experience firsthand the eloquence, variety, and wit of precise language, they have little incentive to enlarge their own vocabularies.

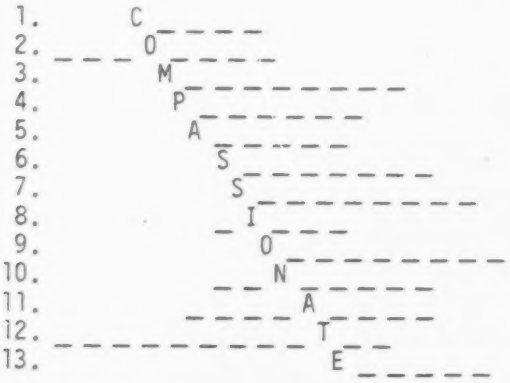
Major Skills of Vocabulary

A. Identification of the New Word or Concept

1. Encourage students to keep vocabulary journals, wherein they list new words encountered in their reading. As they list each word, ask them to note where they saw the word, what they first thought it meant, what it sounds like, and what images it reminds them of. Then they should look up the word in a dictionary and note the meaning and etymology of the word. Give extra credit for using the word in a class discussion and for finding it or hearing it in another context.

2. Word configuration activities or crossword puzzles will help students learn to recognize new words. The

following acrostic was developed for use with "The Guest," by Albert Camus, in Adventures in World Literature.



Clues:
1. job, might be disagreeable
2. to point out as deserving blame
3. to put into movement
4. large, relatively level land area raised above adjacent land
5. eagerly or greedily
6. alone
7. drawn into wrinkles
8. an attack that does not give up
9. stubborn, clings to opinion in spite of facts
10. one of body of soldiers, esp. in France, serving as an armed police force
11. water passages where tide meets river current
12. thrown into mental confusion
13. sent away from one's home or country

Answers:
1. chore
2. denounce
3. mobilized
4. plateau
5. avidly
6. solitary
7. shriveled
8. siege
9. obstinate
10. gendarme
11. estuaries
12. disconcerted
13. exiled

B. The Use of Context Clues

Readers often understand a word in terms of the content area being studied, i.e., by using the context surrounding it to gain its meaning. Technical vocabulary and signs, symbols, and abbreviations are included in this category. If a student does not know the meaning of a word in a particular context, it does little good for him to recognize a word by sight.

1. Nonsense words

Sentences which contain nonsense words will help students learn to determine meaning by context.

Students should not only suggest possible meanings, they should tell how they arrive at those meanings.

Ex. The duberdoo waddled to the edge of the pond, ruffled his feathers, and plunged into the water.

The inkolant cow lay under the big shade tree and watched the other cows grazing in the pasture.

2. Contextual Synonyms (Cloze procedure)

Prepare sentences or paragraphs, leaving blanks for certain words that may be determined by context clues. The students supply the missing words, describing why they chose each word. Using paragraphs from a literary work in this way will give students further experience with assigned readings.

Ex. from "The Lagoon," Joseph Conrad, England in Literature

"In the stillness of the air every tree, every leaf, every bough, every tendril of creeper and every petal of minute blossoms seemed to have been bewitched into an immobility perfect and final. Nothing moved on the river but the eight paddles that rose flashing regularly, dipped together with a single splash, while the steersman swept right and left with a periodic and sudden flourish of his blade describing a glinting semicircle above his head."

Ask students to identify the action of this passage and relate it to the story as a whole. Just as a word must have context, so the passage itself should have context.

3. Teachers should use precise language, including formal words in appropriate context, in their classroom speech. Calling a student's response "erudite" will arouse his interest in that word. Teachers should compliment students for their effort to use new words in oral and written work.

C. The Study of Word Elements

The student gains knowledge of the common (mostly Latin or Greek in origin) prefixes, roots, and suffixes that are the bases of most English words. Derivatives and the study of etymology are included.

1. Loan Words - Etymology

"Loan words" are words borrowed from other countries and popularized in our language. Often the spelling

and pronunciation of a loan word has been changed. (Ex. crepes from the French)

As an exercise to develop the skill of analysis, assign students to discover the loan words used in "The Glass Menagerie," that match the meanings below.

_ _ _ _ _ _ _ _ _ 1. Greek word referring to a fictitious name assumed by an author.

_ _ _ _ _ _ _ _ _ 2. a French word referring to a collection of strange animals kept in cages for exhibition

_ _ _ _ _ _ _ _ _ _ 3. a French word referring to a sweet, jellylike dessert made of a starchy substance and milk.

_ _ _ _ _ _ 4. an Anglo-Saxon word meaning a person who chooses to suffer or die rather than give up his faith or principles

_ _ _ _ _ _ _ 5. an Italian word referring to a model or pattern of perfection or excellence

_ _ _ _ _ _ _ _ _ 6. a French word that implies an intent to hurt by taunting with mocking ridicule and veiled sneers.

Answers: 1. pseudonym
2. menagerie
3. blancmange
4. martyr
5. paragon
6. sarcastic

2. Talk Through Method

The teacher, having read the assigned story, is aware of interesting and important terms that may be new to students. Writing the term in context on the board, the teacher elicits students' knowledge about the word:

What do they know about the word?
What other words are similar (common prefixes, etc.?) Where have they seen the word before?

The teacher establishes the meaning by relating the word to the original context, to students' prior knowledge, and to its etymology.

Ex. Malignant used with tumor, related to malpractice, malevolent, malign, and malnutrition - "mal" means something bad.

Autocrat related to automobile, autograph, autobiography, automatic, and autonomy - and also democrat and technocrat. "Although he was a well-respected businessman in the community, in his own

home he was an autocrat who intimidated his wife and bullied his children."
"Auto" means _____. "Crat" means _____.

3. Using roots or base etymologies, students can create word chains.

Ex. Vertigo - anniversary - annual - biennial - bifocal

("Vert" means turning; "annus" means year; "bi" means two) This example uses three roots to link five words, domino-style. The chain could be continued by adding the word "focus." Challenge students to see see who can make the longest chain of the year (and check their work to be sure they are dealing with roots instead of common spellings..."bi" is a root of "biennial," but not of "big.")

4. Assign a project, where students research etymologies for common words, and depict one of them on a poster. Arouse interest by giving many examples ("focus" originally meant "fireside"; "carnival" comes from the Latin for "meat"; "gymnasium" comes from a Greek word for "naked").

D. The Study of Word Relationships

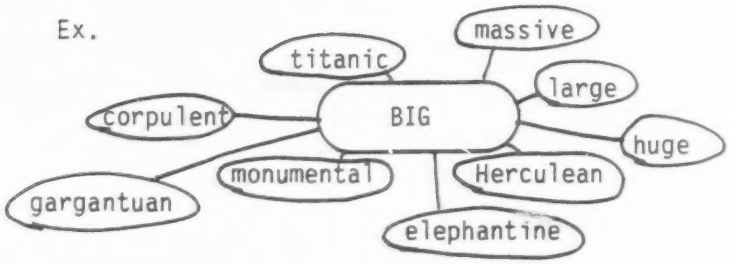
Students learn synonyms, antonyms, homonyms, and acronyms. Work with analogies and categories further extends their thinking with regard to words.

1. Synonyms

The students should be aware that they will rarely find two words with exactly the same meaning. Instead of literal meanings, they should look for relationships between words of similar meaning. The words may differ in emphasis or connotation. Synonyms allow students to express an idea in several ways.

a. Use clustering to help students generate a group of synonyms for an over-used word. Put a word like "big" in the center of a circle. Cluster as many synonyms as they can think of in the space around the circle. Clusters such as these may be kept in student notebooks or folders for use in writing.

Ex.



b. A variation of the clustering activity is to go around the room asking each student to supply a synonym for a common word like "walk." Start them off by giving examples like "stomp," "lope," and "sneak." This activity encourages listening also, since no student should give a synonym that has already been given.

c. Teach connotation by showing students how to do a feature analysis. Decide on the word to be used and brainstorm to discover all possible distinctions of the word. What features of the meaning determine which synonym will be appropriate? For instance, if the word is "trip," what makes one trip different from another? Students might suggest such attributes as "purpose" or "duration" or "destination." Next, brainstorm for a list of synonyms, such as "expedition," "flight," "tour," or "journey." Finally, ask students to relate the synonyms to the features they have identified. Some synonyms will apply several times; others have very limited application.

Student involvement in this activity is important, since it leads to the internalization of new words and relationships. Use of the overhead projector to construct a grid, with features listed across the top and synonyms listed down one side, will allow visualization of this activity and encourage discussion of connotations.

d. To reinforce the idea that synonyms are not equal ways of expressing the same idea, and also that the "fanciest" words are not necessarily the best way of communicating, offer some of the following homilies for translation:

Precipitancy creates prodigality. (Haste makes waste.)
Pulchritude does not extend below the surface of the dermis.

It is not proper for mendicants to be indicatrous of preference.
Cleave gramineus matter for fodder during the period in which the orb of the day is refulgent.
Socially-oriented individuals show a tendency toward congregating in gregariously homogeneous groupings.

These, and 15 additional examples can be found in the November 1983 issue of Notes Plus, from the National Council of Teachers of English. Students enjoy creating their own "translations" of contemporary phrases and slogans. For example, "Events proceed more satisfactorily with a carbonated beverage having a syrup base made from the dried leaves of the cocoa plant and the seeds of kola nuts."

2. Antonyms

The concept of opposites involves fundamental thought processes which require thorough command of vocabulary. The PSAT and SAT use antonyms to test verbal skills. Strategies for teaching antonyms can be found on pages 7 and 8 of this guide.

a. To promote thinking about the concept (as opposed to merely finding the right antonym for a given word), ask students to construct their own test items, using given vocabulary words, names or phrases from literature being studied, or words chosen by the students. Discussion of the procedure for choosing an antonym among five foils will help students understand the concept.

For example: EUDORA WELTY A. Willa Cather
B. Emily Dickinson C. Edith Wharton
D. Edgar Allan Poe E. Edna St.Vincent Millay

The "correct" antonym is (D) because Poe is the only male author among the choices. Be prepared, however, for someone to discover a similarity - such as birthplace or background, or first initial - which links Eudora Welty to four of the choices in a divergent fashion.

Alert students to similarities of grammatical structure which can determine an antonym choice.

IMMUNE A. commune B. susceptible
C. inoculate D. inject E. virus

In this example, (C) and (D) are verbs, and (A) and (E) are nouns, thus pointing to (B) as the answer. All the foils are related to "immune" by context or root word, and (C) even has a prefix ("in") which sometimes indicates an opposite.
b. A study of affixes and root words will help students understand antonyms. Frequent reference to Greek and Latin etymologies will familiarize them with common roots like these:

capere (take, seize)	tenere (hold, have)
mittere (send)	ferre (bear, carry)
stare (stand)	graphein (write)
legein (say, study of)	specere (see)
plicare (fold)	ducere (lead)
ponere (put, place)	scribere (write)
facere (to do, make)	

3. Homonyms

Homonyms present the special problem of words that sound alike and are spelled alike, but have different meanings. For instance, "chase" means both to pursue something and also to ornament metal. Homographic words, like "minute," meaning unit of time and "minute," meaning very small add to the student's confusion. Finally, a third group of words, including "heir" and "air," sound alike but are spelled differently.

a. Show students how to make mnemonic devices which will help them remember a spelling.

ex. hear and here: To hear well, you need ears.
heir and air: An heir is always a he.
principle and principal: The principal is your pal.

b. Have students construct SAT test items which feature homonyms.

ex. MINUTE A. week B. hour C. second
D. day E. huge

In this antonym item, the "trick" is obvious, but only if the test-taker reads through the last item.

4. Acronyms

Acronyms provide an increasingly common way of shortening titles of organizations or concepts. By noticing etymologies, students will learn that words like "radar" were once acronyms, spelled in capital

letters.

Below are some commonly used acronyms that refer to college-related tests. For how many of them can students provide the full title?

PSAT/NMSQT, SAT, ACT, AP, ASSET

Through brainstorming, students will supply many more acronyms from current experience. A copy of the day's newspaper will provide examples such as MIRV, SALT, and NASA. Focus on the psychology and semantics behind acronyms such as MADD, RAISE, and PRIDE.

As a class exercise, ask students to create acronyms and the words they represent, perhaps using names of novels (GATSBY, HUCK, etc.) or their own first names.

5. Analogies

Analogous reasoning is fundamental to sound thought. Used to convince, explain, or make conclusions, it also plays a vital role in students' transfer of learning. Therefore, experience with word analogies can serve the double purpose of enhancing thought processes as well as reinforcing vocabulary. Pages 5 and 6, Chapter I of this guide list types of word analogies and strategies for teaching them.

a. One of the best ways to concentrate on the thinking which creates an analogy is to ask students to write analogies and then discuss their reasoning. They can use vocabulary words, characters or concepts from literature, and names of products, songs, or personalities from contemporary culture.

b. Complement your students' efforts by using analogies (yours or theirs) on regular classroom tests. Try giving an "analogy of the day," to expose them to the difficulty level of the PSAT. Rather than emphasizing only "the right answer," detail the test-maker's thinking, which accounts for one answer being considered best.

For example: GREECE : CLASSICAL ::
A. Italy : Rome B. Germany : Beethoven
C. America : democratic D. France: Romantic
E. Anglo-Saxon : Beowulf

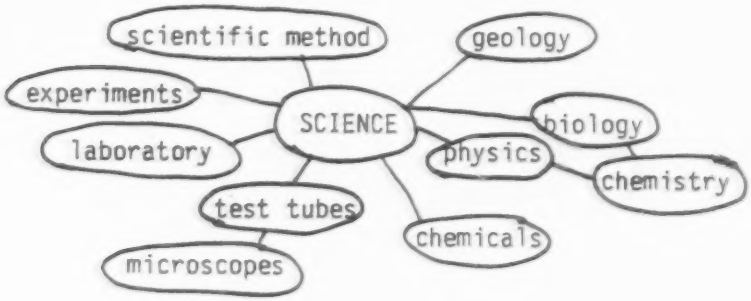
The relationship is a proper noun : adjective,

which eliminates (A), (B) and (E). Although (C) and (D) both seem to fit, a closer look shows that Classical and Romantic are both terms referring to literary periods. Thus, (D) is the best choice.

6. Categories of Words

Students may group words in a list according to many different categories - parts of speech, meanings (literal and connotative), synonyms, antonyms, etc. This activity reinforces knowledge of word meanings and values, and encourages thinking at the evaluative level.

a. Give students a term, such as "Science." Ask them to generate (by clustering) as many related words as they can. A typical cluster might look like this:



The very nature of clustering leads to categories. Here again, thinking processes must be respected. Some students will want to group by "concepts," "branches" and "equipment," but others may discover a different pattern.

b. Students may be given categories with a vocabulary list. They assign words accordingly.

c. Experiment with items like those in Stage II, the newest version of Trivial Pursuit. Prepare six questions, the answers to which can be classified in a general theme. (Answering the questions correctly is only part of this game, the easy part!)

Example: 1. What is the name for a pair of ladies' shoes which are white, with heels and toes in a darker color?
2. What do we call a broad range of colors, beliefs, or objects?
3. What is a synonym for ghost?
4. What do we call a large-scale public

display?
5. What do we call an officer of the police who is just below superintendent?
6. What is it that Rodney Dangerfield can't get?

The answers (spectators, spectrum, specter, spectacle, inspector, respect) share a common root, specere, which means "to see."

E. Knowledge of Multiple or Variant Meanings of Words

Each generation gives new meanings to many English words. Some meanings outlast the original meanings of a word. Slang and technology contribute new words and new meanings to the language constantly. In addition, students learn that the jargon of a particular career or hobby is crucial to success in that area.

1. Americanisms

Americans express themselves frequently in the form of colloquialisms which are unique to this country. Some dictionaries even identify "Americanisms" in their entries. The Great Gatsby contains many such words ("bootlegger," "Ivy League," "hot rod," " old sport," etc.) Have groups compile a list of such phrases from various historical periods in America, using literature read for the class.

2. Slang

Slang dictionaries can arouse students' enthusiasm, as they almost invariably learn new terms. Discussions about the origin of an expression can be enlightening also.

3. Euphemisms and DoubleSpeak

Euphemisms are used to soften unpleasant realities, or to change the image of a particular occupation, group, sociological status, or ethnic origin. We are quite accustomed to saying "senior citizens" instead of "old people," "passed away" instead of "died," and "sanitation engineer" instead of "janitor."

Bureaucratic euphemisms provide much of the tone in Orwell's 1984. They figure so prominently in American government that in 1973, the National Council of Teachers of English formed a Committee on Public Doublespeak, which publishes the Quarterly Review of Doublespeak and gives a yearly award to an outstanding example of political euphemism. This review offers

many examples for classroom discussion, such as "Peacekeeper" for the MX missle, "revenue enhancement" for a tax increase, and "vegetation manipulation" instead of "cutting down the trees." The review is

available through NCTE, as is Daniel Dieterich's book, Teaching About Doublespeak.

4. William Safire's On Language (1980, Avon Books) is a brilliant resource for the teacher or student who is interested in changing language patterns and usages. Why not assign "word reports" by asking a student to find one item in the book which is interesting enough to report to the class. (The book features hundreds of page-length items on slang, neologisms, jargon, pronunciation, dialect, and origins, as well as items on changing usage and style.

5. Sniglets

HBO's "Not Necessarily the News" has spawned student interest in creative word coining (called Sniglets) for events, sounds, or images which do not currently have a name. For instance, "penciventilation" is the act of blowing on the tip of a pencil after sharpening it. The most effective Sniglets take advantage of onomatopoeia and etymology, and they also require analogous thinking. Rich Hall has written a book, Sniglets, and he also writes a column in Reader's Digest.

Creating Sniglets seems to be both easy and satisfying and it certainly encourages students' awareness of word power in their environment. Ask them to create a word for the sound of books slapping shut one minute before the bell rings, for the sound a Velcro shoe clip makes when it opens, for the second scoop on an ice cream cone that falls off just as you taste it, etc.

6. Use the daily comics to enhance teaching of vocabulary. Many comics rely entirely upon figurative speech for their humor. Page 53 of this guide suggests a bulletin board which focuses on figurative language in comic strips. Some students become adept at contributing literary puns (such as asking "how much John Keats owed to the Grecian urn.").

F. Dictionary Skills

The array of information the dictionary has to offer should be woven through any program that emphasizes thinking skills. Using the dictionary merely to find rote definitions fails to take advantage of its many resources, and

fails to involve students in higher levels of thought.

Many students believe a general knowledge of a word is sufficient for understanding it and using it. They also may believe that "vocabulary" words are strictly for the classroom, and have no use in day-to-day life except maybe to impress people. Finally, they use a dictionary only for unfamiliar words, and more often, to check on the spelling of a word.

A good dictionary contains etymologies, pronunciation keys, syllabification and stress, parts of speech, and inflected forms for all words, as well as variants, synonyms, antonyms and usage notes for many words. In addition, many dictionaries feature essays on pronunciation, usage, dialects, and the history of the English language; style manuals; lists of proofreading symbols and signs and symbols from mathematics and science; directories of colleges and universities; dictionaries with etymologies of English given names; and countless other resources. In short, a dictionary is a gold mine, and one that is largely unexplored.

1. Basic dictionary skills include alphabetization, use of guide words, understanding of pronunciation and stress symbols and recognition of the etymology listing.

2. If your classroom dictionaries contain a section with etymologies of proper names, give students time to discover what their names (and the names of relatives) mean, and to make connections with some of the names used in the literature they have read.

3. Start a bulletin board list of items which received a name from a person or place. (examples, sandwich, denim, silhouette, cardigan, malapropism, etc.)

4. Dictionary Answer Hunt

Using a dictionary, students hunt for answers to questions such as those below. Examine your classroom dictionaries before you construct the questions. Some "student dictionaries" have fewer resources than others.

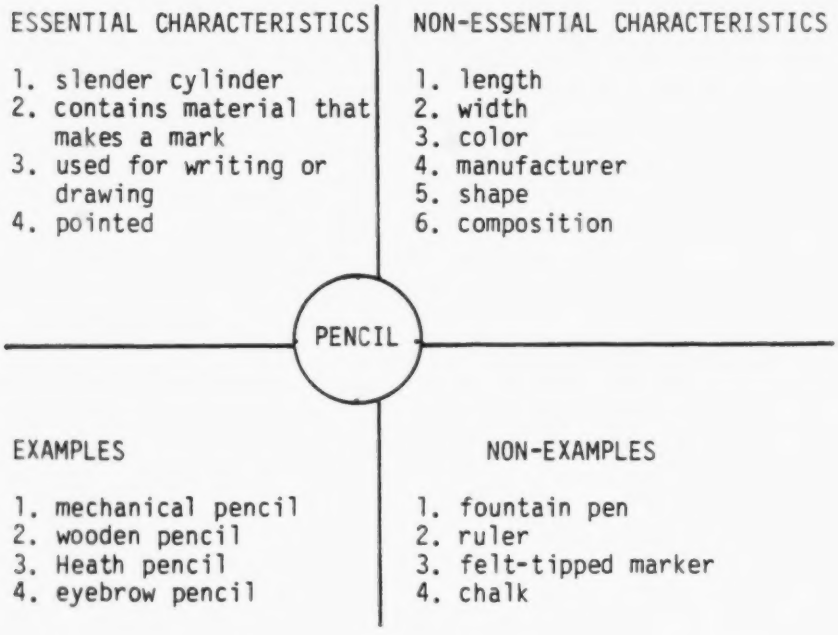
-What connection is there between <u>agony</u> and ancient Greek athletic contests?
-What does the Greek root of <u>analysis</u> mean? How does this relate to its definitions?
-How are the human heart and the word <u>record</u> (v.) related?
-What does a <u>taxicab</u> have to do with a goat?

-What is the connection between accost and a rib?
-What is the connection between an ambulance and walking?

Some of these questions are easy; others require searching thought. For instance, the connection between "taxicab" and "goat" depends upon the root "cab." However, a student's delight upon "getting" that connection, will reinforce the habit of thinking about words, even familiar words. Challenging and creative questions about vocabulary words will instill thought into routine memorization of new words by students.

5. The Frayer Model

The Frayer Model (illustrated below) utilizes characteristics and examples to define a word, but it places equal emphasis upon discovering non-examples and characteristics that are non-essential.



The Frayer Model requires higher level thinking since it asks the student to evaluate relevant and irrelevant characteristics, to identify a word from various perspectives, and to identify examples and non-examples. For instance, in the model above, imagine the discussion over whether to include an eraser as an essential characteristic! Students

gain a new perspective on familiar words as they think through the various information demanded on this model.

Divide the class into small groups. Give each student a short list of vocabulary words. For each word, the group will brainstorm, using the dictionary as necessary to list for each word the essential and non-essential characteristics, and examples and non-examples.

Compare group results, using the chalkboard or overhead. To take full advantage of the thinking in this activity, students must recognize the varying nature of responses.

G. WRITING

Precise vocabulary is one of the surest routes to writing style. Broadening of vocabulary is almost as important as broadened experience to a developing writer.

The discovery of Roget's Thesaurus is a godsend to many young writers. Those who own computers now have access to software which will suggest synonyms for any word that is used excessively in a writing. Enchanted with this ready-made variety, they eagerly replace every one-syllable word with a four-syllable synonym, only to discover that vicious trick - connotation.

Only familiarity and practice with a word will make it an effective tool for the writer. In an environment that is practically devoid of graceful and adequate language, students need help to find appropriate models of usage.

1. Try dictating from selected literature. Bring to class a favorite novel, poem, or an especially fine journalistic piece. Choose an excerpt which you think might interest the students, and which contains language which is precise and effective. Dictate the excerpt, asking them to transcribe it as you read. After a suitable interval for students to "fix" their work, show the excerpt on the overhead, so students can compare.

This simple activity fosters listening, writing, and thinking skills - and also interjects vivid literature from "outside readings." Discussion may center on punctuation, spelling, and format as well as the particular focus of vocabulary and figurative language. A "new" vocabulary word used in this

context should have more relevancy than one first seen on a list.

2. Reinforce students for using words appropriately, as opposed to just using them in trumped-up sentences where another word would do just as well, perhaps better. Reward a student's effective use of a "difficult" word by sharing the writing with the class.

3. Encourage students to "scavenge" for new words in the newspaper, in textbooks for other subjects, and on television. In schools that feature a "Word for the Day," make a point of using the word in your class, and reinforcing it throughout the year. Use the bulletin board to post James Kilpatrick's column, "The Writer's Art." This column, carried by TODAY, concentrates on common problems of style and word usage. It usually carries humorous examples of improper usage which have appeared in newspaper articles. For instance, he tells of a Winston-Salem, N.C. paper that reported of a meeting at which "about 300 people poured over laser equipment and other displays." Seeing this column on your bulletin board might cause students to form the habit of reading it on their own.

Resources for Teaching Vocabulary

Berbrich, Joan. (1971) 101 Ways to Teach Vocabulary, Amsco School Publications.

Berry, Thomas Elliott. The Most Common Mistakes in English Usage, Chilton Books.

Dale, Edgar; O'Rourke, Joseph; and Bamnean, Henry A. (1971) Techniques of Teaching Vocabulary, Field Educational Publications, Inc.

the Reading Resource Specialist in your high school